

Design



A guide to B.T.I. p. 20



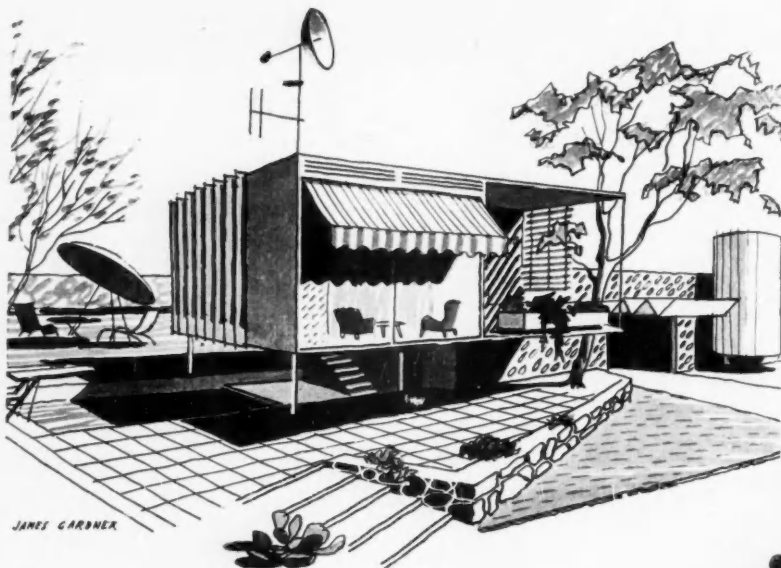
W & T Avery Ltd p. 8



The retail choice p. 29

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DESIGN for June

*The Story of
Coronation Souvenirs*

Design

New brooms at the BIF?

LAST YEAR, writing after the event, we felt compelled to be critical of the British Industries Fair. This year, writing before the opening, we feel encouraged to hope for better things, not for the obvious reason that this is Coronation Year but from various signs that suggest new policies in our national trade fair.

Last year there was a clear contrast between the spectacular showmanship at the DAILY MAIL 'Ideal Home Exhibition' and the paltry presentation of the BIF. This year there is promise of some drama in the BIF displays both at Earls Court and at Olympia.

Last year there was all too little emphasis on design in British industry. This year several displays will spotlight the contributions that our designers can make to the industrial health of the country. The Society of Industrial Artists has been invited by the BIF authorities to show representative examples of its members' work. The Royal College of Art is contributing evidence of the thorough training that its industrial design students now receive in their handsomely equipped studios and workshops. The RCA has also been responsible for the design of the overseas buyers' reception area, one of the focal points at Earls Court but one that has year after year called out for some refreshing treatment. And this year for the first time a new BIF poster in the Underground stations lists "Design" alongside "Invention" and "Development" as one of the attractions of "the world's greatest national trade fair".

At the Warwick Road entrance to Earls Court the Council of Industrial Design has space to advertise its services to manufacturers and to draw the attention of buyers to 'Design Review', the selective illustrated index of good British designs in current production. At Olympia the principle of a selective exhibit within a trade fair is extended to a display of approved Coronation souvenirs.

It is too early yet to say that these several indications add up to a change of climate at the BIF, but it certainly looks as if the wind is now blowing from a warmer quarter. If it keeps up, the BIF may really become the "pageant of British achievement" claimed on the posters, distinguished alike for its professional showmanship, for the high standing of its exhibitors and for the quality and design of the goods shown. Once it is realised that only the best is good enough for the BIF the world will queue up to be there.



LETTERS

Comments on DIA exhibition

SIR: The Design and Industries Association's 'Register Your Choice' exhibition (DESIGN April pages 8-11) has naturally attracted comment from a public whose interest in 'contemporary' - meaning what we regard as the *best* contemporary - design is steadily growing. An example of this changing taste was to be seen at the Ideal Home Exhibition, where I found Messrs Heal's stand busy while nearby pretentious displays supported only a few bored-looking assistants.

I discovered that room R provoked admiration even from people who would have no idea how to set about furnishing in this way. This points to a definite need for design consultants in furniture shops to advise clients how to achieve the results they admire. Even if it were necessary to charge a small fee for such a service it would surely be widely welcomed, for mistakes in the choice of furniture cannot usually be put right in a lifetime. I suggest this in the conviction that design is now recognised to be an expert matter calling for special training rather than just a flair. What enterprising firm will take it up?

Incidentally, the captions to Mr Reilly's article were guilty of a strange bias by describing the wallpaper of room L as 'porridge', but the upholstery of room R as 'oatmeal'.

ROGER COOMBS
89b Old Park Ridings
Winchmore Hill
London N21

SIR: I was rather agreeably surprised at the result of the voting on the two display rooms at Charing Cross Station.

While it is bound to give a great deal of help to our friends in the retail trade in the South, it is very doubtful if we in the North can place too much reliance on the result.

We ourselves are stocking (and have for some time) quite a good proportion of contemporary furniture and furnishings, and with the more subdued designs recently produced, we are finding a much readier market.

Such an exhibition, I feel, is bound to be a great help to the public, manufacturers and retailers alike, and a similar exhibition in one or more of the larger Scottish cities, would, I feel, enlighten even the moderately conservative minds in these Northern parts to the undoubted advantages of having more living space without sacrificing anything in usefulness or even comfort.

My first impression was that the com-

parison was unfair, but after careful thought I am convinced it was absolutely true and it only needs to be shown consistently to have a tremendous effect on the sales of the more subdued contemporary furniture and furnishings.

GEORGE ROBERTSON
Managing Director
John L. Robertson Ltd
Dundee

SIR: As a test of the opinion of the general public regarding contemporary furnishings as against the more traditional type I thought the recent Exhibition at Charing Cross Underground Station was extremely valuable.

But one must be a little cautious, I think, in accepting the voting results at their face value. I believe a proportion of the people voting for contemporary would revert to traditional when it came to the point of buying for themselves. I think it is very important that the Exhibition should also be shown in the provinces, particularly such areas as Manchester, Newcastle and in Scotland, where the voting results are likely to be different from London.

One would imagine that manufacturers will be bound to take a careful note of the voting results and that their design policy will be adjusted accordingly.

BERNARD A. HOPEWELL
Director
Hopewells Ltd
Nottingham

From Sir Herman Lebus

SIR: I am glad to read in the daily Press that similar exhibitions to the DIA at Charing Cross will be held in different parts of the country. I think it would be wrong to draw conclusions as to the tastes and requirements of a real cross-section of the country from one exhibition or, for that matter, the tastes and requirements of any particular strata of wage earners.

HERMAN LEBUS
Finsbury Works
Tottenham
London N17

SIR: As much publicity as possible should be given to the DIA Exhibition in the hope that it will be shown in many different parts of the country. Any exhibition that stimulates an interest in the home is good both from the point of view of the furniture trade and from that of the consumer.

But I think the organisers of the exhibition would agree that, for the policy to produce the best results, there should in future exhibitions be a much wider variety of furniture to choose from. They may also agree that it would be an advantage to have experts available to give information or advice to those who are choosing. It would not matter much if the opinions of the experts differed provided they were given sincerely and as a result of experience and study.

J. C. PRITCHARD
Director and Secretary
The Furniture Development
Council
11 Adelphi Terrace
Robert Street
London WC2

American imitation?

SIR: Your article on 'The Potteries - Design Policy and Practice' (DESIGN December 1952) afforded me great pleasure. On page 11 you referred to the origin of this modern American tableware. In my opinion it is more difficult to find any obvious Danish influence, but as far as Sweden is concerned there are many signs that the design trends in this country during the 'thirties and even more during the 'forties have a strong following in the United States.



From my point of view this is especially important. I realise that the best things being made by the art industries of a country or by an individual designer must inspire the products of other countries. It seems to be disagreeable to see how this can sometimes blot out the national individuality of one country's designs. Although, I realise that it can only be advantageous to the product (and that is surely what all of us finally think is perfectly right) if it is released from narrow national points of view and can be judged and understood by all people in our cultural sphere.

To designers who have played some part in initiating these trends, it is not very stimulating to remain anonymous. But when they are imitated by others they feel that it is time to complain. In the works of the excellent designer Eva Zeisel we can see that in being influenced by Swedish pottery she is going too far. On page 8 in the same article there is a coupe shape dish which is not particularly noteworthy in itself, but is clearly an imitation of a faience decoration I have painted with variations since 1943.

I am surprised that a designer with the standing of Eva Zeisel should wish to be responsible for this imitation, as the decoration on the plate is not unknown to the American public because we have for a long time sold our plate in the United States. The small differences between the photograph in the article and the one which I am sending of my own work (see above) is that the latter is freely handpainted, and although many similar plates are made no two of them are exactly alike.

STIG LINDBERG
Art Director,
Potteries of Gustavsberg
Gustavsberg, Sweden

Further letters on page 38.

POINTS and POINTERS

A PUBLIC'S CHOICE. In our last issue we described with photographs the DIA exhibition 'Register Your Choice'. Now the votes have been counted: out of a total 30,334, 18,188 people voted for the right-hand room with contemporary furnishings. The results are set out fully on page 36.

What moral can be drawn from this? Is it now an established fact that three people in five prefer contemporary design? Questions like this were discussed recently at a DIA lunch hour meeting when the organising committee was on the platform to reply. The Chairman, Harold Hutchison, pointed out that the proportion of men to women who voted did not equate with the total male and female population in the Greater London area, and to this extent the voting did not accurately reflect public taste. However, one young man visiting the exhibition had remarked: "I am the right-hand room, so does that make me a cliché?"

From the meeting came two points, that a "cosy contemporary room had not yet been evolved" and that the right-hand room was "draughty", and one



This room at the exhibition claimed 60% of the votes.

from Noel Carrington who said that contemporary designers "shy away from the easy comfortable chair". In reply Mr Hutchison thought it had been a mistake not to include in the contemporary room at least one really comfortable chair.

The chief claim that can be made appears to be this: although the voting did represent actual purchases, it seems clear that if more retailers included in their stocks articles equal to the design standard expressed in the contemporary room, they would not lose business. In fact, they might well find that they had opened a new market. Further trials in other parts of the country are now needed. Beginning on May 14 Lewis's Ltd in Manchester will reproduce the exhibition and a vote will be taken. Also in Manchester, Kendal Milne and Co will open on May 12 an exhibition of furniture, light fittings, kitchen equipment and other domestic designs chosen by members of the DIA in the region. Lewis's Ltd of Glasgow are displaying a pair of rooms approved by the DIA from May 1-16, and Browns of Chester will hold a similar exhibition in June. Enquiries should be sent to the Secretary of the DIA, 13 Suffolk Street, London SW1.

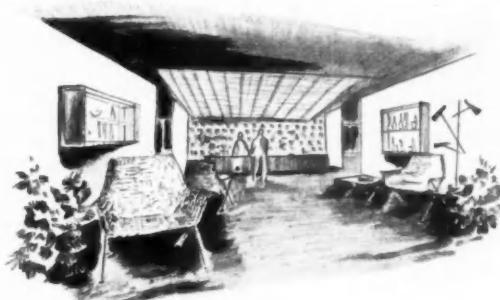
PATRONAGE FOR STUDENTS. Why is it that industrial firms are reluctant to hold competitions for design students at art schools? The question is prompted by the recent competition for the design of a cockerel in pottery. It was held by The Marley Tile Company Ltd, and limited to students working for the National Diploma in Design or studying at the Royal College of Art. The design had to be capable of quantity production and suitable for use as a decorative feature in a living room. The winning design (first prize £50) by Douglas J. Lincoln of the Birmingham College of Arts and Crafts is shown here. More important than the cockerel itself is the principle behind this venture. If more firms in other industries



were to set aside each year a specific problem the design courses in art schools would become more realistic. Architectural students benefit from frequent competitions. Is the young designer not worthy of similar opportunities?

THE CORONATION IN U.S.A. Many leading stores throughout the United States are planning to stage special displays from May 25 to June 2 to honour the Coronation. The idea was put forward by the British Trade Promotion Centre in New York, which is helping stores to obtain a wide range of display material to illustrate the history of England and the ceremony of the Coronation. The underlying theme will be current British designs on the American market and these will be given prominence in the displays. More details can be obtained from the Dollar Exports Council, 41 Buckingham Palace Road, London SW1.

RCA at BIF. The drawing below shows part of the Overseas Buyers' reception area at the BIF, Earls Court, designed in the Interior Design department at the Royal College of Art. On the exterior of the area, to be seen by all visitors to the Fair, will be a selection of work done in the industrial design schools at the College. Textiles will form the chief feature of the display, but furniture, glass and silver designs will also be included.

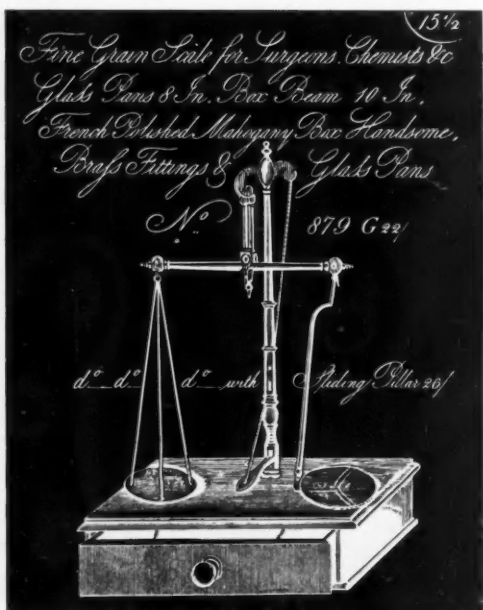


DESIGN POLICY IN INDUSTRY

The use of a consultant designer as a necessary adjunct to the design policy in engineering firms is still novel in this country. How successful the arrangement can be is proved in the following article which deals with the complexities of design in a large industrial organisation.

W & T AVERY Limited

J. M. Benoy



The old and new versions of the chemist's dispensing scale. LEFT: made in 1843.

RIGHT: designed by John Barnes of Allen-Bowden Ltd, 1947.

THERE ARE FEW PRODUCTS with a background of public service to compare with those manufactured by W. & T. Avery Ltd, whose trade mark is based on the scale beam, the earliest of weighing devices which was used in pre-dynastic Egypt. In the process of time and in the interests of accuracy and fair dealing, an extensive control of weights and measures has been adopted in civilised countries. Today, the Board of Trade specifies the denominations of weights and measures that may be used, and new designs of weighing and measuring machines may not be employed in trade until they have received Board of Trade approval. Subsequent inspection and verification of weights and measures in use is the responsibility of local authorities. The ever increasing demand for accuracy and the elimination of error, coupled with the need to comply with the requirements of the weights and measures regulations, impose certain limiting factors on design. Nevertheless, experience has shown that these limitations act as an incentive to the designer rather than a handicap.

Birmingham is the centre of the scale trade in this country, and the firm now known as W. & T. Avery Ltd was established there in 1730 in quite a small way in Digbeth, one of the oldest streets of the town, by a blacksmith and 'stilliard' maker with the name of Ford. Ford was succeeded by a scale-maker named Barton and subsequently by Thomas Beach who made, in addition to steelyards, various other designs of scales. He was followed by Balden and afterwards by William and Thomas Avery, who gave their name to the firm. It remained a family business until 1894, when it was converted into a public limited company.

Early designs

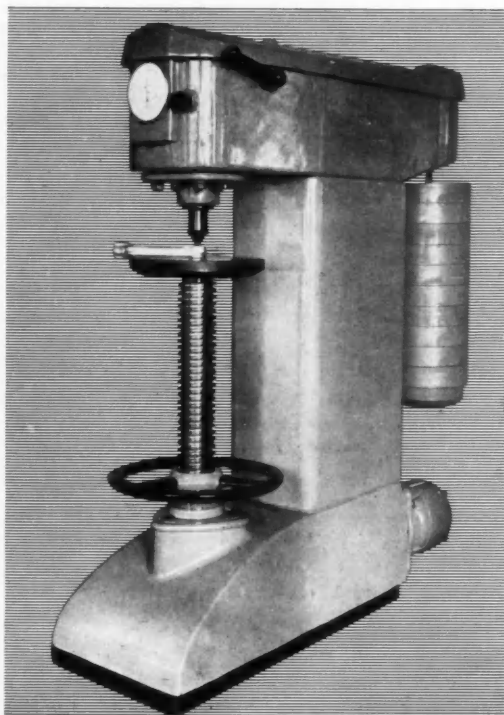
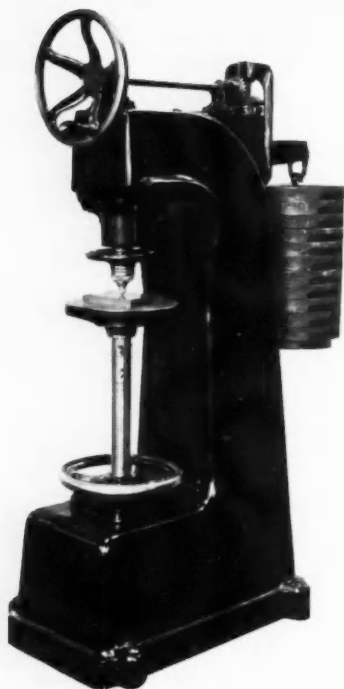
Technically, there was little progress in the design of scales during the nineteenth century. Nevertheless, the Avery business achieved a great advance with the introduction of the Avery agate and brass beam, which incorporated a patent taken out by Sharkey in 1857, designed to provide protection from dust and thus reduce wear and friction. This became universally accepted as the balance most suitable for weighing tea, tobacco and other costly goods and, incidentally, did much to improve balances used by the retail trade throughout the country. It was made in a variety of forms, usually with very ornate standards and highly decorated polished brasswork. Of all balances constructed within the last century, the Avery agate and brass beam has had the longest period of popularity, but it has now been largely supplanted by the continuous knife edge beam, the use of which, until com-

paratively recently, was confined to precision balances. In 1878, the first comprehensive Weights and Measures Act was passed by Parliament, and this led to a great expansion of weighing machine business all over the country. The various Avery works proved inadequate for the volume of business the company had to handle and it was decided to concentrate the whole production on one site. In 1895 the need was met by the purchase of the famous old Soho Foundry, built exactly one hundred years before by Matthew Boulton and James Watt for the manufacture of their steam engines. Some of the original plant and machinery is still in use today, on a site which now covers 25 acres and comprises probably the world's most complete plant for the production of weighing machines. Since the last war a new factory at Sherburn-in-Elmet, near Leeds, has increased the firm's production.

Variety in demand

Today there are Avery scales to deal with practically every weighing need. Types exist that are capable of measuring the weight of a human hair, of a railway train in motion, of a grain of powder, of one hundred cattle at a time, and of any mass of material which can be mechanically handled. Developments in the technique of weighing, which have taken place at Soho Foundry, embrace the application of optical, electrical, hydraulic and pneumatic methods of measuring, or of obtaining a state of equilibrium with the loads placed upon the scale. In the course of these developments a number of specialist firms have been acquired, including, in 1913, Henry Pooley and Son Ltd, noted for railway weigh-bridges and for services to the British and overseas railways. Progress in the design of static and dynamic testing machines led to amalgamation with Joshua Buckton and Co Ltd, in 1934. The change in the method of distributing petrol, and the use of a measuring instrument instead of a can, brought the manufacture of petrol pumps into the scope of the undertaking at the Soho Foundry. Avery-Hardoll Ltd was formed to handle this business and certain related French patents. Latterly, production has been transferred to a new factory at Tolworth, Surrey.

Design policy in the broad sense is, of course, controlled at Board level; it is implemented by a Designs Council which meets at intervals of three weeks, or more often if required. At these meetings new ideas are considered and projects approved, or progressed through the development stage. Sales, finance, technique, planning and production interests



are permanently represented on this council; other specialist representatives are co-opted when required to advise on particular problems.

Background to design

A suggestion for a new product may emanate from any one of a large number of sources. It may be put forward by a technical representative to meet a customer's requirement; it may be the result of many weeks of detailed market research by the sales division; it may equally well originate in the production department or in the research group. Whatever the source, a very thorough investigation into the potentialities of the suggestion is first carried out by the sales division. This may cover possible markets, competitors' products, retail and consumer requirements and so on. If the response is favourable, the next stage is to initiate a 'product development request'. This consists of a specification drawn up on fairly broad lines, defining the purpose, performance and other main requirements of the proposed product. After ratification by the design council, the 'product development request' is passed to the technical division for action. Within this division are two departments, one of which, headed by the chief designer, deals with standard designs for quantity production. The other, under the 'special products' engineer, handles non-standard items. For instance, an overseas inquiry was received recently for a coin-operated weighing machine of a type similar to one already shown in the firm's sales promotion literature, but to be modified to suit local conditions. Although the standard design department had developed the

TOP: This hardness-testing machine was in production from 1920 to 1945. It was operated by hand and little attention was given to the external appearance.

LEFT: First produced in 1943, this machine is similar but operated electrically. The housing has been re-designed to enclose more working parts and present a clean appearance.

RIGHT: The famous agate and brass beam scale which dates from a patent taken out in 1857. It became universally accepted for weighing costly goods.



original production model illustrated in the catalogue, it was the special products department who tackled the overseas edition.

Use of consultant designers

Development of a design is usually a lengthy business. It involves consideration of alternative ways of meeting specification requirements, and of the many factors, including cost, production problems, and so on arising from these alternatives. Discussions may be necessary with other divisions in the firm, as well as with concerns outside. Usually, it is at this stage that the industrial design consultant is brought into the picture. He is informed that a new machine is being designed, or that an existing machine is being re-designed for better performance and appearance. From now on he keeps in continuous touch with the technical departments, and so can be sure of a flying start when the time comes for him to begin serious work on the machine's appearance.

An industrial design consultant is used because W. & T. Avery Ltd have no internal design staff to style their machines. They use, and have used for many years, an outside design organisation. The next step is to issue a detailed plan, specifying the main design principles to be followed, and including expected performance, overall shape, size and weight, and final appearance. At a meeting with the technical manager, the chief designer and the members of the staff concerned with particular aspects of the internal mechanism, the industrial design consultant is given his brief. He then prepares alternative designs in the form of 'visuals' and presents them to a full meeting of all

persons concerned, including the technical, sales and works managers. When a 'visual' has been approved, the industrial design consultant may make a wooden model which is then discussed with the technical staff and others interested, and, if agreed, detailed work on the drawing board begins. At the same time proving is undertaken in the experimental shop to check design points where necessary.

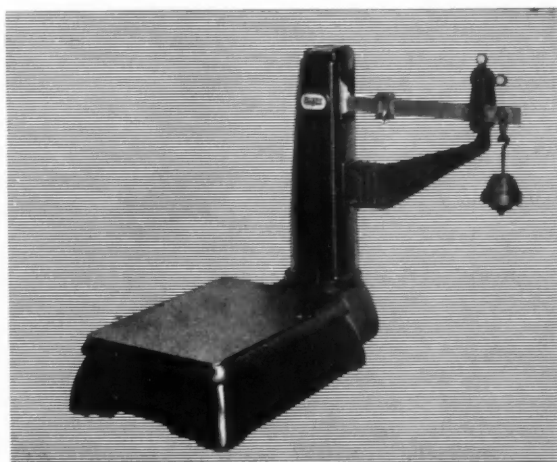
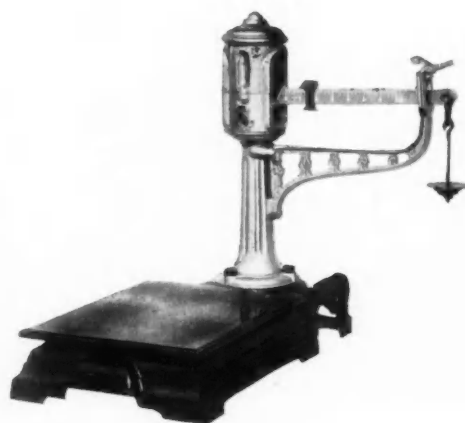
Eventually, the final experimental model is prepared, approved visually, and tested against the original specification. At this stage it is submitted to the designs council for approval, but before this is granted, the various specialists interested consider it critically from every angle. Operational performance and user convenience, appearance and ease of maintenance, cost of production and many other factors are taken into account. It may be necessary for the project to be referred back so that undesirable features can be eliminated and improvements incorporated. Ultimately, however, approval in principle is granted by the designs council and further pre-production work begins.

Procedure at this stage will vary with the complexity of the product undergoing development. Not one, but

DESIGN DEVELOPMENT IN PLATFORM SCALES

LEFT, the machine is ornate and clumsy in appearance.

BELOW, a design by Raymond Loewy, first produced in 1945, and showing a marked simplification of the form.



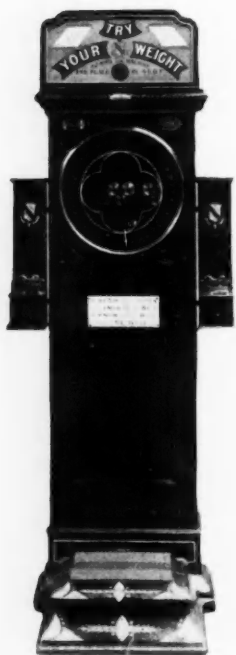
several pre-production models may be constructed and given extensive trials by selected customers in their own premises. Such trials last a year or more, and great importance is attached to the experience thereby gained. Production planning begins with a thorough examination of every component and sub-assembly contained in the pre-production model. As general approval has already been given, it is now a question of translating the design into terms compatible with production requirements. The examination is carried out jointly by the technical and planning staffs, with the industrial design consultant in attendance. As the examination proceeds, drawings are amended, modified parts produced afresh, and a revised pre-production model assembled. This model fulfils many purposes; it acts as a check on assembly processes; it is a means of estimating production costs; it is a basis for tooling up and provides the standard for accurate performance figures. All is now set for production to begin.

The personal weighing machine

Two case-histories will serve to show design development in recent years. First let us take the familiar

coin-operated personal weighing machine. An early design made by Avery, and in use between 1903 and 1918, appeared in two forms. In one the machine was housed in a comparatively simple wooden cabinet with painted metal stand and fittings. This exhorted you to "Try Your Weight" and, without guaranteeing that the result would be successful, went on to say that "To weigh yourself often is to know yourself well. To know yourself well is to be well". The other type appeared in a somewhat ostentatious cast iron casing, styled as a Classic portico with a painted marble finish and labelled boldly and unequivocally "Correct Weight". Both reflected the taste of the period and in neither instance was any attempt made to relate the casing to the mechanism which it had to cover. In 1925, model A 670 was introduced and this represented a considerable advance on previous types, both functionally and aesthetically. A new process, vitreous enamelling, was used to achieve a durable, smooth and easily cleaned surface that would stand up to outdoor public use. Shortly after the introduction of this model, in 1928, a small machine, A 686, was put on the market for use in chemists and other shops. The appearance of this machine was improved by moving the coin box

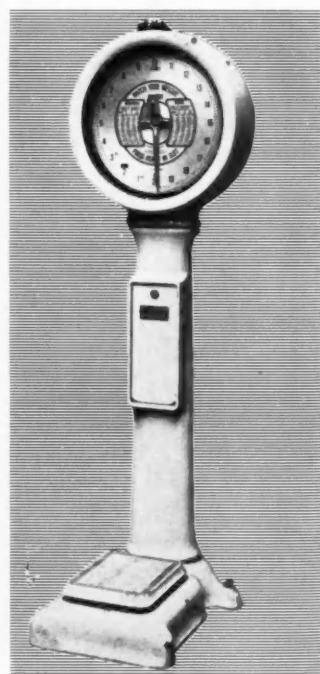
1903-18



1903-18



1925-39



The six personal weighing machines here show a development typical of many engineering products where functional needs have remained approximately constant for a long period. They also show clearly the impact of the new movement in design felt in this country during the late 'twenties.

1903-18: Two similar machines in different housings. On the left is a painted wooden case with 'amusement arcade' typography above. The right-hand machine, with its mock architecture, needs no description. Both versions, with transparent dials, show a delight in the mechanism which is forgotten in later models.

1925-39 (A 670): The need for a straightforward statement of purpose is evident. Functionalism is dominant: the machine is simple to use; the cast iron casing has been designed with generous radii to suit the then new vitreous enamelling process. Height 6 ft 1 in.

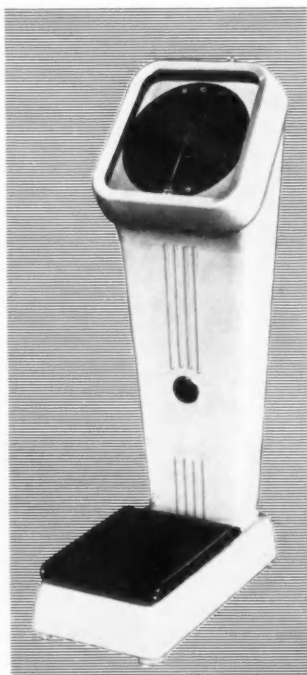
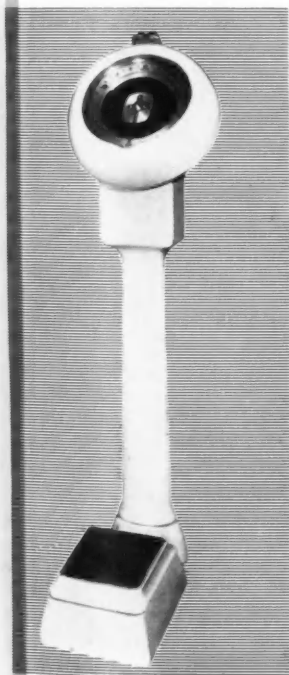
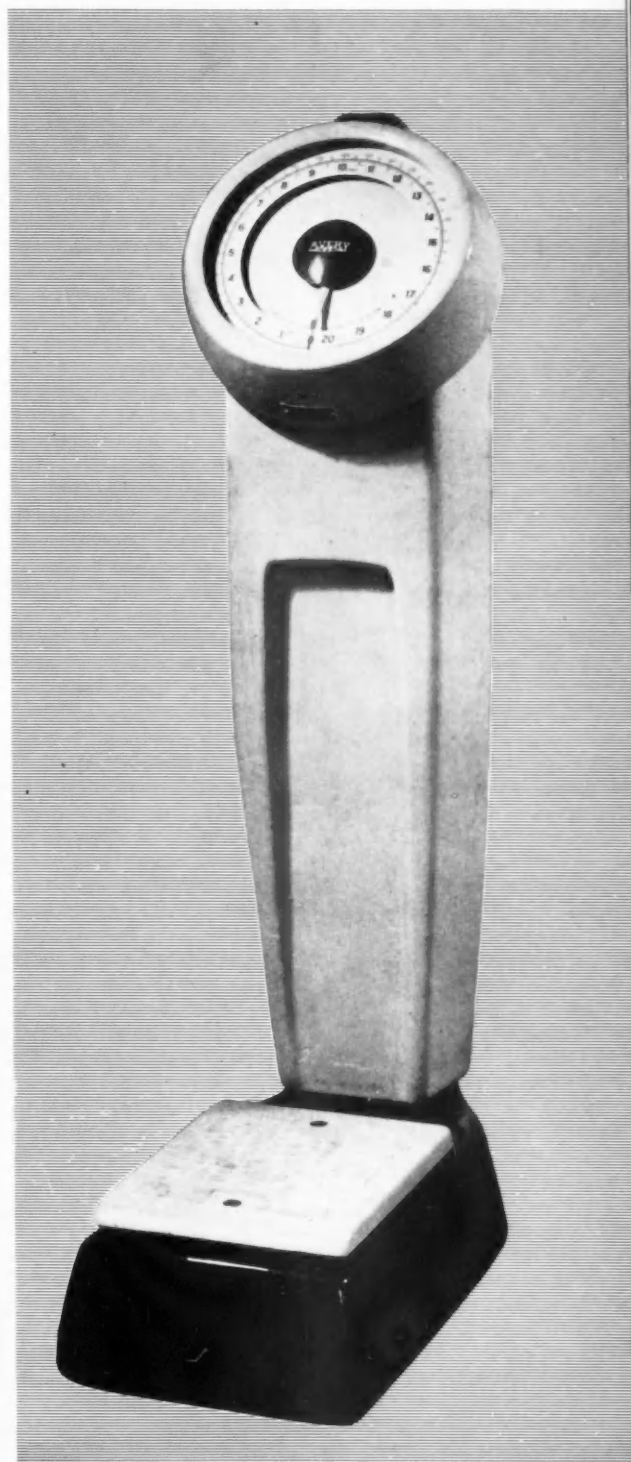
1928-52 (A 686): A smaller version (4 ft 7½ in) for use in shops, this machine represents a further advance. The coin box has now moved up the column and the curves of the pedestal and dial housing show the beginnings of a unified aesthetic effect.

1939: Raymond Loewy's design for the same machine. This prototype was not produced because of the war. It illustrates a phase of the design movement in which the stylist's mannerisms (e.g. the parallel lines) often marred straightforward, functional designs.

RIGHT, 1952: A return to the main line of development seen in A 686. This machine for shop use (4 ft 1½ in) was designed by John Barnes of Allen-Bowden Ltd. The tapering form and recessed panel lighten the appearance of the column. The success of the design is partly due to the colour contrast between base and column.

1928-52

1939



close up to the dial, and the latter being sloped to facilitate readings at the reduced height.

In the late 'thirties Raymond Loewy was commissioned to design a new version of A 686. The incomplete prototype is illustrated. Owing to the war, however, it never went into production. After the war, and in collaboration with John Barnes of Allen-Bowden Ltd, a new design was introduced for retail shop use only. A noteworthy feature of all these models is the consistently high standard of layout for the numerals on the dials.

Counter scales

Developments in the 'fan' type range of counter scales are also of interest. The earliest model, produced between 1911 and 1928, was 'stove' finished and charted 1 lb by $\frac{1}{4}$ oz divisions. The stand, of which the single leg is adjustable for height, so as to ensure a level base, attempted to bring the scale to eye level. But in so doing the handling of the scoop was to some extent impeded. It will be noted how the housing closely followed the internal mechanism, with an honesty symptomatic of later design in this field. In

1928 model A 603 was introduced and later also a 3 lb scale, A 618. The mechanism was completely redesigned and external surfaces improved through the use of vitreous enamel. The addition of chromium rim and silvered glass escutcheon plates was in keeping with shop interior design practice of the period. The latest model, introduced in 1950, shows a further simplification of the casing and a general cleaning up in the interest of hygiene. Advances in production technique have resulted in an attractive two-piece housing with flexible plastic jointing. In the development stage much thought was devoted to the question of visibility. The customer must not only be able to read the scale, but also to see what is being weighed. A photographic system is employed to ensure that Board of Trade requirements are met. The resulting effect on the shape and size of the waist and on the turn-up of the pan can be readily seen if compared with the preceding model.

Market research

It must be remembered that production in this case is for the trade and not for the public. Relationship

1911-28



14

1928-50



Design: Number 53

between Avery's and their customers is maintained mainly through the firm's sales and service representatives. The need for careful servicing is emphasised by the strict application, in the public interest, of the weights and measures regulations by local authorities and their inspectors. Distribution and service are closely interlocked in the Avery organisation. The United Kingdom is divided geographically into 14 areas, each operating under the control of an area manager. Each area in turn controls district offices and service branches established in every town of size throughout the country, and totalling 236 in all. The sales staff operates within the same area organisation. The needs, present or future, of all trades in respect of weighing machines are reported to the head office through this organisation.

Overseas, the same general pattern is to be found. It is the same problem of sales and service with the added complications of local weights and measures regulations, differences in national outlook and method, and of distance. Local considerations, together with currency restrictions and customs regulations, sometimes necessitate local manufacture. In the main, scales designed for home use are suitable for

use in countries overseas, with revisions to comply with metric or other denominations of weight.

Design team-work

Perhaps the most interesting point arising from this study is the fact that W. & T. Avery Ltd rely exclusively on an outside industrial design consultant for work on the external shape and finish of products requiring such attention. The majority of big manufacturing undertakings employ a design staff of their own for this purpose, occasionally employing consultants for special tasks, or when new ideas are needed. There is always a danger that the full-time works staff may stagnate through constant application to the same subject, and most firms go out of their way to guard against this tendency. The alternative, to employ consultants, has the advantage of bringing new inspiration and new thought to the problems and the products concerned. However, it depends on the consultant, and on the people he works with in the firm, whether he will make a success of the job. It is true he may bring with him experience gained in other industries; on the other hand he may lack the specialised knowledge that, particularly in an engineering industry, is essential to the work he has to do. This is a factor that varies in importance according to the type of product, and the degree of specialisation in manufacture; it also affects the type of designer required. Industries whose products incorporate decorative qualities may need a designer who has a leaning towards graphic design; quantity produced engineering products on the other hand call for a designer with a naturally sympathetic understanding of engineering problems. In both cases he needs to be given ample opportunity to learn at first hand all there is to know about the materials employed, production methods, technical processes, and market requirements. This can only be done with the willing co-operation of the firm's staff, and, equally, with willingness on the part of the consultant to learn. Without this, he cannot take his place successfully in the team.

1950



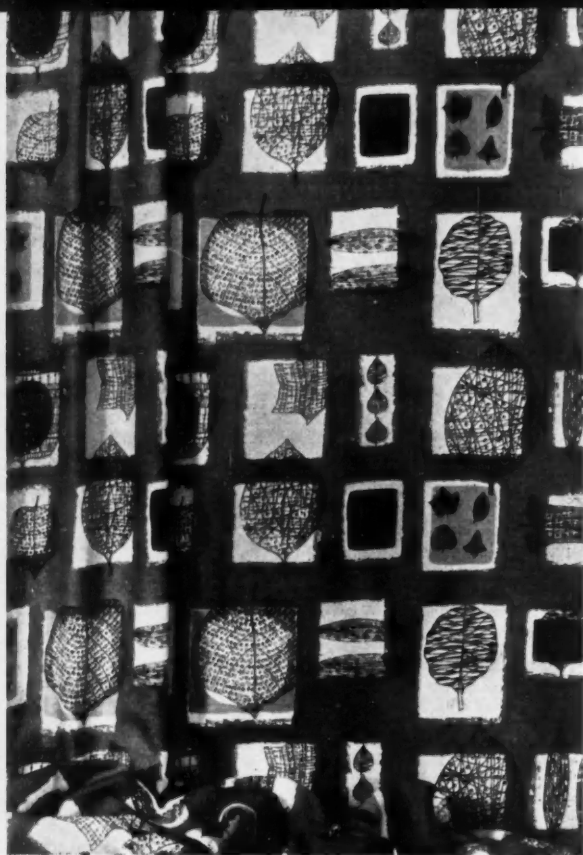
FAN TYPE COUNTER SCALES

A similar development to the personal weighing machine can be seen. The version of 1928 shows the new design approach for vitreous enamelling. The latest model shows how the earlier design has been simplified for the convenience of production and use. The height is 23½ in.

REVIEW OF CURRENT DESIGN

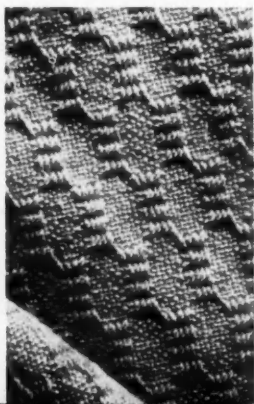
This feature offers a selection of goods up to the standard acceptable for 'Design Review', the photographic index of current British products that is open for inspection at the London headquarters of the CoID.

Manufacturers in a wide range of durable consumer-goods are invited to submit their new products for inclusion in 'Design Review'. Enquiries should be addressed to Mark Hartland Thomas, Chief Industrial Officer, The Council of Industrial Design.



ABOVE: An exciting example of the power of abstract design to summon a poetic allusion more strongly than any realistic treatment. The dappled effect of the light and dark patches, with the leaf skeletons falling across them, makes one imagine sunlight through trees and falling leaves, before even the name of the design - 'Fall' - has registered consciously. It is a screen-printed heavy crêpe cotton, 50 inches wide, done in five colour ways. Designer: Lucienne Day. Maker: Edinburgh Weavers.

BELOW: Hand-woven woollen cloth with the variable height texture which is now part of the contemporary trend. Designers: Erna Cohn and Lucie Arnheim. Maker: Lucerna Handweavers.

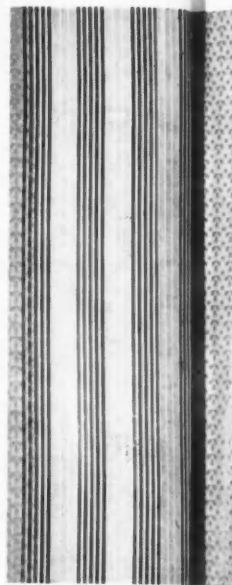


LEFT: Adjustable light-fitting. The elongated shape gives the impression that light is thrown in the desired direction, at perhaps some sacrifice in efficiency as compared with a parabolic reflector. Designers: A. B. Read and Dennis Lennon. Maker: Troughton and Young (Lighting) Ltd.

RIGHT: Flower basket, in copper-plated wire with tin tray, cellulosed white or other colours. The white wirework masks the flowerpot just enough for indoors, but maintains an association with garden furniture. Maker: C. B. McGeoghegan.



ABOVE: For flexible plastic sheet pattern design is still tentative. Here we have a modest essay in stripes and a discreet floral, both of which can be cut to required shapes without disjoining the patterns. Maker: Storeys of Lancaster.

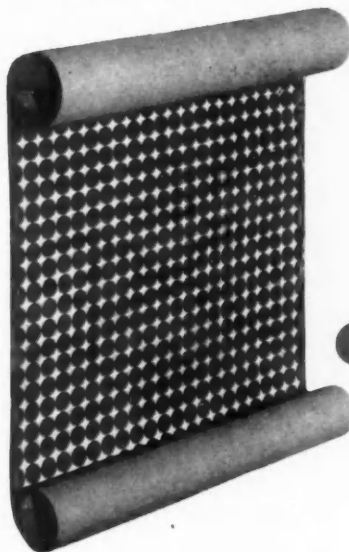




ABOVE: Fitting for wall-light or grouped on a rod as a pendant. Takes one lamp shining upwards, the other down. Metal or painted finish. An essay in solid geometry—not so simple to design as it looks. Designer: Noel Villeneuve. Maker: Heffer and Co.

RIGHT: 'Yolande', with a repeat of 24 inches by 21 inches. Stylised and realistic flowers are combined here in harsh contrast to make a rich effect. Designer: H. Hofbauer. Maker: John Line and Sons Ltd.

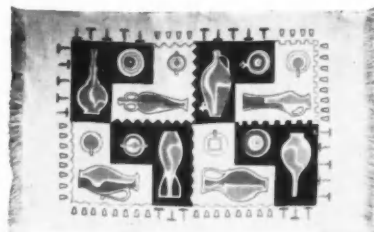
BELOW: 'Lomond', a very sharp pattern to a small scale, which could be used as a strong accent in one place in a small room, or for a large hall it could be used as all-over texture. Designer: Henry Skeen. Maker: As above.



BELOW: Electric domestic mixer. There is a dignity in the straightforward simplicity of this small design which brings relief from the overstyling of many electrical gadgets. The nameplate appears to be an afterthought and is therefore too obtrusive. Maker: K.K. Electrical Products.



RIGHT: Mixing bowl of steel and vitreous enamel, white or ivory with red, green or blue rim. The flaring of the lip to an oval for the handle is a good example of functional design that is also visually successful. Fortunately the label can be washed off at once. Maker: Gainsborough Enamelled Ware Co Ltd.



ABOVE: Linen place-mat with a lively pattern to make a gay introduction to a party. It can go either way up. Designer: John Wright. Maker: Liberty & Co.

RIGHT: Picnic set in which the case converts into a table. The fluting which stiffens the sides is nicely proportioned in scale with the case and is echoed on the flasks. Maker: The British Vacuum Flask Co.



Paul Reilly

Some impressions of design in Western C

IT IS NOT THAT THEY STILL TAKE their proportions from their wives' thighs, nor that they are still a fat race, for thick necks and corporations are not yet again common sights, but it seems, nevertheless, that every German dimension is just that much bigger than one is accustomed to in this country. The knife and fork handles, the white-metal door levers, the wooden drawer pulls, the chair seats (even when modelled on our own Windsors), the brass light fittings and the sturdy white porcelain all show a self-importance that almost recalls Hitler's Blood and Soil taste ('Blu-bo', as its opponents called it).

And yet nothing is further from the minds of the present generation of West German designers than to carry on the Nazi tradition. If there is one sure impression of current design in the British Zone that a tourist can collect on a short visit, it is this eagerness to forget the obvious and primitive manners of totalitarian architecture and to pick up the broken threads of the early 'thirties. But the essential German substance remains, that extra thrust and weight in

pattern and form that appear in their wallpapers, posters, kitchen equipment, furniture and in the buildings themselves. Perhaps the clever young architect who was my guide in Hamburg was right when he traced it to the German preference for sitting formally even in an easy chair. He contrasted the modest, relaxed position of the Englishman at ease with the formal, self-important posture of the German off duty.

There is, though, no denying that the modern Germany is well in step with, even if some paces behind, the contemporary movement as seen in other Western countries. The same shapes are found in the modern furniture, the same pre-occupation with new materials and new methods of fabrication; their art school students are as fascinated as ours by sculptural forms, abstractions, new uses of synthetic materials and, in their furniture workshops, by pieces that can be pressed, prefabricated and assembled. The lure of stacking and packing is as strong in West Berlin as in Hamburg, as in London or New York. Only when one sees the pieces that the post-war Deutscher-Werkbund selects as examples of good current design does one sense the loss of the years since 1932. The forms are pure, the lines straight, the angles right and the colours pale. The impression to a post-Festival English eye is of a somewhat outmoded puritanism. Even where, as in the remodelling of the interior of Berlin's old Hotel Am Zoo, the architect achieves a lightness and elegance that are quite contemporary by any standards, the colours, textures, accents and contrasts, that we have come to expect, are missing. It is almost as if the designer has studied the Western modern movement in black and white photograph only; and that may well be the case, for not many of the present-day practising architects in Germany have had time since the war for much foreign travel; their impressions of Western trends must be second-hand from the magazines they so avidly read.

Let no one in Britain, however, find cause for complacency in this apparent time-lag in German design. The pressure is all the other way, for in the businessman's paradise that is the Rhineland today it would

New forms in street furniture are features of the rebuilt areas of German cities. This cantilevered tram shelter, shaped like an aeroplane wing, has recently been erected in the centre of Hanover



ern Germany

A typical street corner in Cologne. In foreground concrete and glass police traffic control box; in background new shop and office building by Architekt Wilhelm Riphalm.



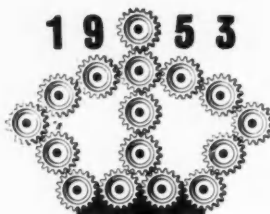
be unthinkable to have any but a modern office building. Even those built soon after the war, four-square concrete boxes that they were, broke uncompromisingly with traditional styles. Those more recently completed, carefully detailed and finely finished, prove how quickly the gap is being narrowed. The devastation of the second world war is providing the same impetus that reparations afforded after 1918. And this colossal modern building programme pulls in its train a host of service and domestic industries that are already competing in the markets of the world.

Having so much of his past obliterated, the modern German looks only to the present and the future; there seems an almost mystical importance attached to being up to date, to having only the latest designs and equipment. The universal use of architectural competitions, the patronage by industry of the thriving art and technical schools, the sponsoring by shops, hotels and offices of the latest idiom in interior design

are all evidence of this intense interest in the contemporary world. Even the ship owners, often the most conservative of business men, are in the swim; the great Hamburg-Amerika Line sponsors competitions for the interior design of its new ships and awards the prizes to twentieth-century schemes (compare the recent report on the furnishing of the Princess Royal's suite in the British tanker *Regent Hawk*: "Several periods of furniture have been used in the drawing room"; "the walnut Chippendale armchairs"; "the main smoke-room which is furnished in the Jacobean period"; etc).

Add to this pre-occupation with the present the indefatigable industry of German business executives, the uncomplaining acceptance by their workmen of long hours and low wages and the ever-present incentive of the foreigner in their midst and one gets some idea of the challenge that modern Germany presents to the older centres of European industry.

A GUIDE TO THE



BIF

Selected new designs on show at

EARLS COURT
OLYMPIA
CASTLE BROMWICH

The British Industries Fair and the Coronation are within a month of each other. More than ever foreign buyers are being attracted to this country and we have the opportunity to show them that British designers can equal and surpass their rivals from abroad. Manufacturers in all industries have had every incentive to prove that a good standard of contemporary design can bring them business. In this feature we offer a guide to the Fair. Our guide for visitors is not exhaustive but it may help to point the way to those firms with a design policy.

THE BIF IS OPEN until May 8: weekdays 9.30 am to 6 pm. The public is admitted after 2 pm daily and all day on Saturday, May 2. There will be no public admission to the London sections of the Fair on Friday, May 8. Public admission charge: 2s 6d for each building. Home trade buyers: 5s for badge which will admit to all sections of the Fair. Overseas trade buyers: free.

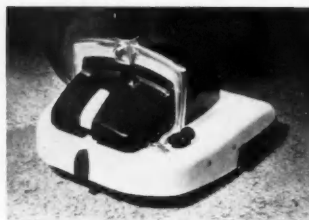
EARLS COURT, London

DOMESTIC PRODUCTS AND CLOTHING: GLASSWARE, POTTERY, PLASTICS, WALLPAPERS, CARAVANS, ETC

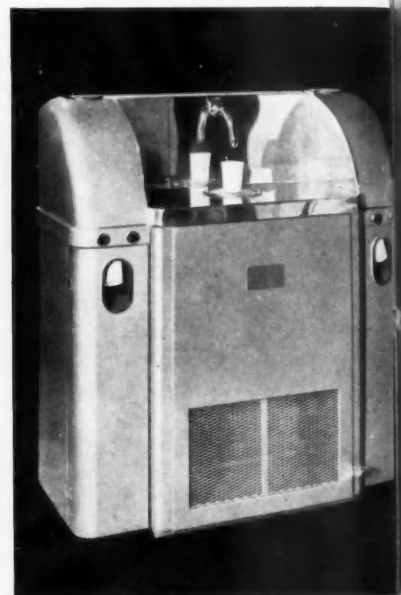
ONE OF THE MAIN FEATURES is the stand designed for Imperial Chemical Industries Ltd by Hulme Chadwick. The company is demonstrating possible uses for ARDIL, a protein fibre, and TERYLENE, a polyester fibre, in fabrics designed by Tibor Reich, Lucienne Day and other designers. Also in the textile section the National Wool Textile Export Corporation has a stand showing the products of more than 100 firms, and British Nylon Spinners Ltd are exhibiting a very wide range of nylon goods. John Holdsworth and Co Ltd have some new moquettes in their range with designs suitable for use on contemporary furniture.

A new and comparatively large section contains prefabricated buildings, many of them with interiors of contemporary design.

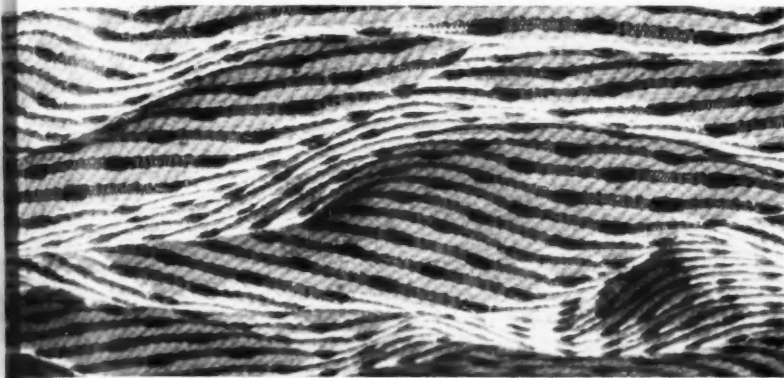
BELOW: New vacuum cleaner that also scrubs and polishes. For cleaning normal carpets the machine automatically adjusts itself to the depth of pile; for carpets with very deep pile a toe switch is provided to give three positions of adjustment. Maker: Fillery (G.B.) Ltd.



ABOVE: One of a range of tubular steel stools and chairs with the central column suspended from the four legs by tensioned springs. The seat can be adjusted for height and it pivots on the column. Maker: S. & B. Poultney.

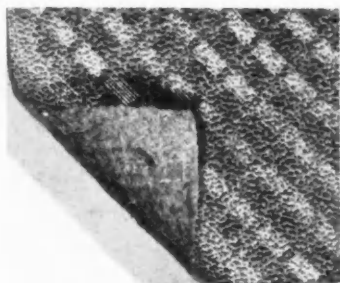


ABOVE: Ice water dispenser that produces a continuous supply of water at a controlled temperature. The cooling system is automatic. The water jet is operated by a foot pedal and the paper cups are expendable. Construction is of heavy gauge sheet steel with removable front panel giving access to working parts. External fittings are chromium plated. Maker: Ice Water Dispensers Ltd.

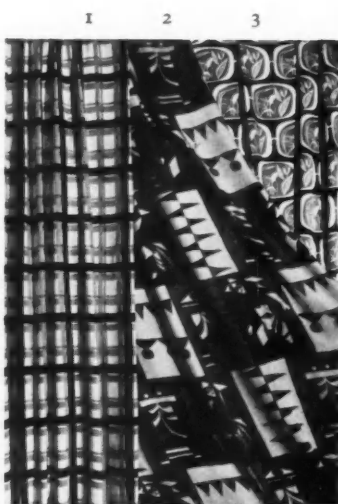


ABOVE: 'Kinallen', a furnishing fabric with cotton warp and wool and cotton weft. The fabric is ridged to give a three-dimensional textured effect. Maker: The Old Bleach Linen Co Ltd.

BELOW: Flooring material with a top surface of polyvinylchloride, beneath which is a thickness of felt to provide a soft, quiet tread. It is for domestic and commercial use. Maker: Hardura Ltd.



ABOVE: 'Blazon', a screen-printed design on heavy ribbed cotton or on linen. The design is based on the Kynge Beestes which can be seen outside the Annexe to Westminster Abbey during the Coronation. Designer: A. Gibson. Maker: Morton Sundour Fabrics Ltd.



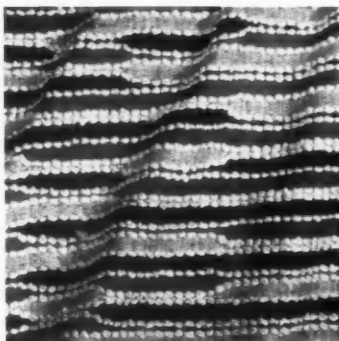
BELOW: 'Fiesta', a printed design by Margaret Simeon on a damask woven in alternate stripes of satin weave and repp, giving vertical stripes of contrasting textures. Maker: Gayonnes Ltd.



LEFT: 1, 'Gay Plaid', a large-scale printed design by Beryl Coles; 2, 'Harlequin', a printed fabric for public buildings, etc, by Mary Harper; 3, 'Apprilla', a small-scale printed motif by George Todd. Maker: Gayonnes Ltd.

BELOW: 'Canterbury Tales', an Axminster carpet with an all-over pattern derived from characters in Chaucer's poem. Size of repeat: 27 inches. Designer: John Palmer. Maker: John Crossley and Sons Ltd.

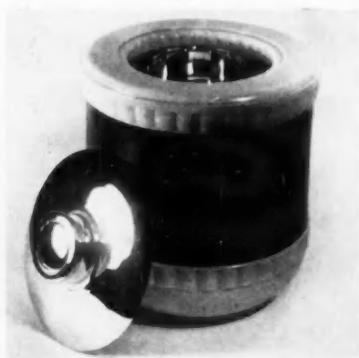
BELOW: 'Aldeburgh', a fabric woven mainly of cotton but with some rayon and wool. The fabric is especially suitable for creased draping. Designer: Marianne Straub. Maker: Warner and Sons Ltd.



OLYMPIA, London

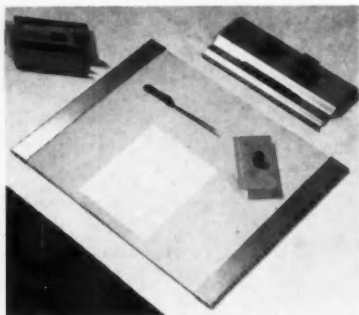
PERSONAL ACCESSORIES AND SMALL MECHANICAL APPARATUS: JEWELLERY, CLOCKS, WATCHES, SPORTS GOODS, PRINTING MACHINERY, ETC

SMALL CRAFT AND MARINE EQUIPMENT are to be found in a large section of their own. Dinghies with hulls moulded in one piece from FIBREGLASS are shown by W. & J. Tod Ltd. A very few good contemporary designs are to be seen in the jewellery section on the ground floor of the National Hall. The Council of Industrial Design has a stand showing a selection of approved Coronation Souvenirs and Representatives of the Council give advice on design in industry.



ABOVE: Vacuum jar for storing ice. It is moulded in paper-filled thermo-setting plastic and has a lid of chromium-plated brass. The vacuum jar is made of heat-resisting glass. Maker: The British Vacuum Flask Co Ltd.

BELOW: Desk set in processed aluminium in a range of seven colours: gold, silver, copper, blue, green, red and black. Maker: Acorn and Lumium Sales Co Ltd.



ABOVE: Boy's junior model bicycle with a specially strong tubular construction. The crossbar is curved downwards at the rear

end to provide for extra saddle adjustment. Maker: The Wearwell Cycle Co Ltd.

RIGHT: Wrist watch with case of chromium and stainless steel. The raised Roman numerals and the hands are gilded. Maker: Smiths English Clocks Ltd.



ABOVE: Lever windlass for use on small yachts and commercial craft for weighing in the anchor. The mechanism converts the lever action into a rotary movement and the gearing is arranged to distribute the load evenly through each stroke of the lever (not shown). For earlier design developments in windlasses by the same firm see DESIGN January 1950 page 20. Maker: Simpson-Lawrence Ltd.



RIGHT ABOVE: Bed-tray with movable support in position to provide reading desk. Construction of tubular aluminium with anodised finish.

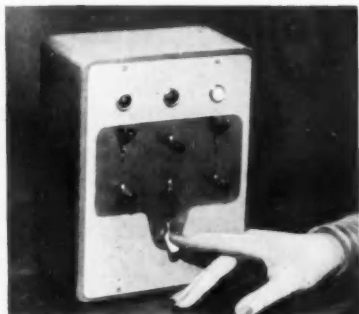
RIGHT BELOW: The same tray in the closed position with folded legs. Maker: The Kaymet Company.



CASTLE BROMWICH Birmingham

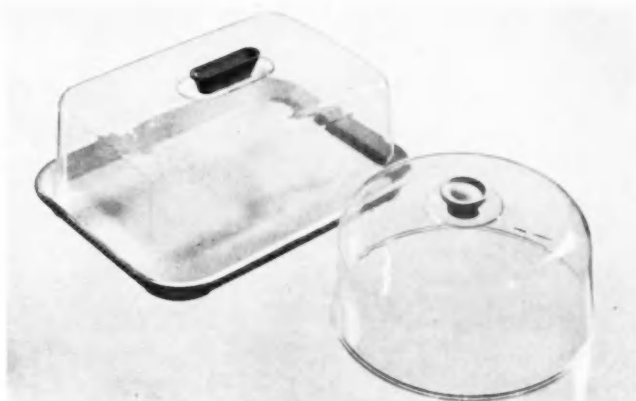
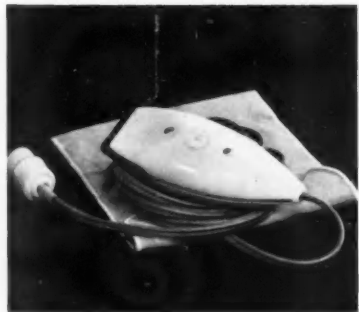
HEAVY AND LIGHT ENGINEERING, CHIEFLY
FACTORY MACHINERY, DOMESTIC EQUIPMENT
AND MATERIALS FOR THE BUILDING TRADE

ON THE STAND OF the British Plastics
Federation 11 firms are displaying
products related mainly to the elec-
trical, engineering and building trades.
In the building and heating section
Andrew Bros (Bristol) Ltd are showing
kitchen units with a new design for
spring operated doors without handles.
In the hardware section there are new
designs for scales on Avery's stand.
Miscellaneous items include the new
ironing table by Bradley and Co Ltd,
and the 'Kub' electric shaver by
Chilton Electric Products Ltd.



ABOVE: Staff locator transmitter made as a separate unit from the relay cabinet. This neat and compact instrument is of convenient size for standing by a telephone switchboard or for wall mounting. Maker: Gent and Co Ltd.

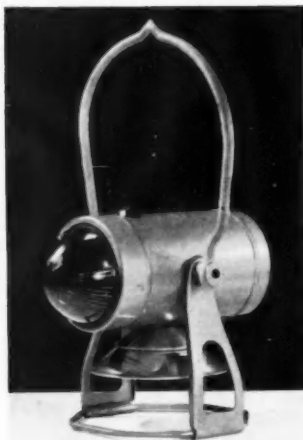
BELOW: KUB electric dry shaver in moulded plastic case. It is for any voltage from AC mains supply and is almost silent in operation. The trademark KUB is moulded with the case and attracts attention away from the elegant tapering form. Maker: Chilton Electric Products Ltd.



ABOVE: Two food covers of polystyrene. The rectangular cover has rounded corners and the food tray has been specially designed to fit under it. Maker: Halex Ltd.



ABOVE: Cup and saucer for canteen and buffet use. These new items are moulded in MELAMINE with an unusually thick section for additional weight and strength. They are available in pink, blue, green and ivory. Maker: Halex Ltd.



ABOVE: All-purpose lamp that is adjustable to any position. The top, shown here in the horizontal position, is surmounted by a red flashing lamp; the strong flood-light reflector is pointing downwards. Maker: L. G. Hawkins and Co Ltd.

RIGHT: Companion stand that has been developed from two previous models dating from 1946 and 1937. The earlier models belonged to the period of severe functionalism: they had simple turned rods forming the heads of the implements with a similar rod of larger diameter for the centre handle. The latest model has trumpet-shaped handles in an attempt to meet the contemporary need for more graceful shapes. Construction is of solid brass with the exception of the poker stem which is made from brassed steel. Maker: Marris's Ltd.



Two cabinets for a tape recorder

John E. Blake

THE SPECIFICATIONS FOR THE NEW REPROVOX tape recorder, manufactured by Savage & Parsons Ltd, were, in general terms, for a machine of high quality performance and of attractive appearance, that would be simple to operate, compact and light enough to be carried with comparative ease. It would be out of place to discuss here its mechanical qualities, though special features have been incorporated which have had a substantial effect on its appearance. The spools, for example, are disposed vertically to avoid tapespill when the spools are full, and all the functions of the recorder are controlled from a single switch. A simple clip-on cover protects the tape path from dust and a slot is provided to guide the tape into position. Other features which should be mentioned include an ingenious track changeover mechanism and an interlocking safety device providing instantaneous starting and stopping. The mechanism is also designed to fit standard 19 inch racking.

To satisfy different tastes, two types of cabinet have been designed, one of wood, the other of steel, both housing basically similar mechanisms. The mahogany cabinet, designed by the firm, was found to be very popular in certain markets, notably among shipping firms. This is not merely an aesthetic preference as polished wood is regarded as an excellent protection against the adverse effects of tropical climates. Also, as it would not be so necessary in this case to consider ease of transit, construction could be solid and sturdy. Additional protection to the spools was provided by steel doors which cover only part of the front panel allowing access to the controls during operation.

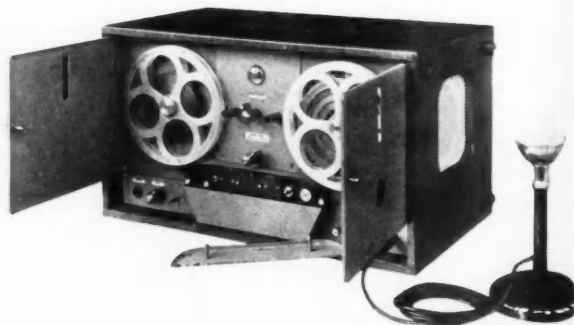
The steel cabinet

Although this model is very suitable for its purpose and will continue to be produced, the firm realised that it would not be entirely satisfactory for the general market. It was felt that not only could the appearance be improved and the shape altered so that the machine would be easier to carry, but that manufacturing costs could be reduced by using a different

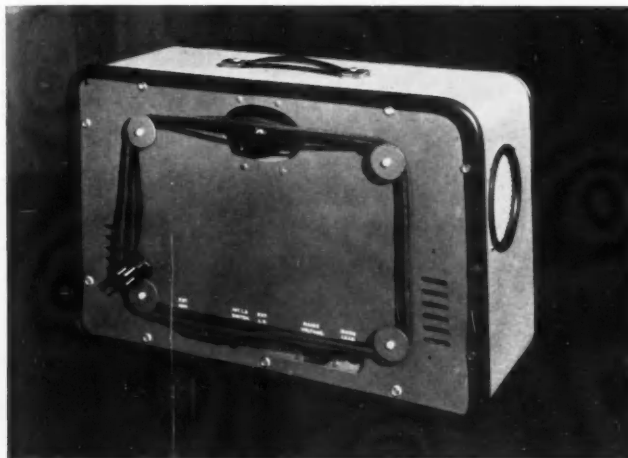


The wooden cabinet. The carcass is of polished mahogany and doors are fitted to give protection to the spools. The handle is at the opposite end to the loudspeaker so that the machine is carried in the vertical position.

The front panel of the wooden cabinet. The arrangement of the controls appears cramped owing to the lowness of the panel. The door-clips add to the rather untidy appearance.



In many branches of the engineering industry discredit has often fallen upon the designer who has a training in aesthetics but lacks an understanding of mechanical and engineering problems. The design of the new cabinet for this tape recorder is a demonstration of what the true function of the industrial designer should be. It also shows an enlightened approach to design on the part of a comparatively small firm producing electrical equipment.

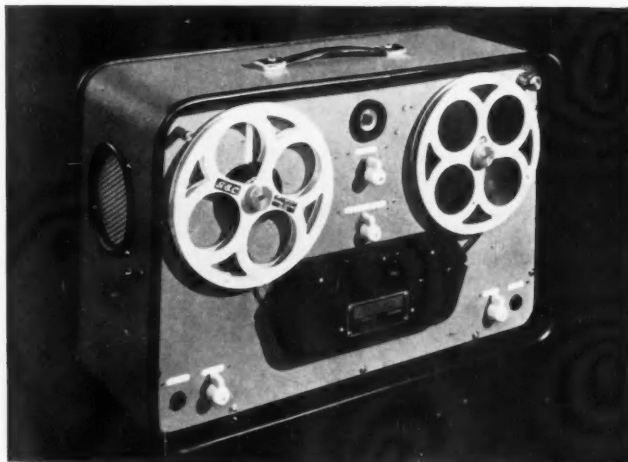


The back of the steel cabinet showing the neat method of storing the microphone and leads.



The microphone slides into a slot in the back panel and is held in place by a wide rubber band.

The front of the steel cabinet. The simple spacious arrangement of the control panel is largely due to the increased height and the omission of doors. All the controls are set well back behind the protective rubber extrusion.



The microphone is produced by Cosmocord Ltd and can be used either in the hand or on the table. The steel legs fold back into the handle.



method of construction. For a firm which specialises in metal construction, the manufacture of wooden parts is expensive, as it is difficult to make use of idle machine time and much of the work has to be 'jobbed out'. The new cabinet then would be of all metal construction and it was decided to employ an industrial design consultant, H. A. Nieboer, to carry out the design.

From the outset the designer was faced with a series of problems which had to be solved. The appearance of the cabinet was a major consideration, though the shape and weight had to be thought of from the point of view of the person who would be carrying the machine for some distance. Absolute mechanical stability had to be ensured and any drumming of the case avoided. Storage for the microphone and the mains and microphone leads had to be provided so that the final article could be neatly packaged. Provision also had to be made for the protection of the controls against damage during transit. Finally, it was essential that the production costs should be reduced. This could be done by making use of idle machine time, by avoiding press tooling on account of the limited output and by devising easy methods of assembly. All these conditions were satisfied in the final design, and the result is a cabinet which is remarkable for its simplicity, its rigidity and its clean, attractive appearance.

Clearly, if the shape was to be altered some rearrangement of the internal components was necessary. This was carried out in conjunction with the engineers and electronic staff. Compared with the earlier model it was thus possible to save 3 inches on the depth, which was reduced to 8½ inches, and to increase the height by approximately the same amount. One benefit which resulted from this change was that the layout of the front panel could be more spacious than had been possible before. This spacious appearance was helped also by the absence of doors, which were considered unnecessary on this model, and of the two projecting door clips.

Construction

The cabinet consists of a flat wrapper supporting the front and back panels. Made of 22 swg black steel sheet the wrapper is reinforced with 16 swg folded angles at the back and front. The folded angles are spot welded along all edges up to the beginning of the corner radius and are set so that the corners of the angles face in towards the centre. Flat corner pieces are welded to the angles giving greater stiffness. The ends of the wrapper are butt-

jointed and welded to a folded angle strip running across the full width of the case. Similar angle pieces are welded beneath the handle attachment so that the weight of the machine is distributed throughout the metal case. The difficulty of providing secure handle attachments has thereby been simply and cleverly overcome.

The combined raw edges of the wrapper and the angle pieces are covered by a black rubber extrusion. This tapers into the recess and ends with a projecting lip which acts as a cushion for the front and back plates. To fix the front plate, which is recessed to a depth of 1½ inches, it is simply dropped into position over the projecting lip and fastened to the body of the case by screws in hank bushes set into the angle strips. Owing to the flexibility of the rubber the tolerance of fitting is not critical.

Rubber protection

The value of the rubber extrusion is twofold. Besides protecting the surface against scratching and the edges against buffeting, it has a beneficial effect on the appearance of the cabinet. The rich blackness of the rubber gives a valuable colour and texture contrast to the grey crackle finish and also lends an appearance of solidity to the thin projecting edges of the wrapper.

The back plate is recessed in the same way as the front, though less deeply, and here provision could be made for the storage of the microphone and leads. The plate itself is cut from MASONITE and four simple pegs hold the leads quite securely during transit. A hole is cut to take the microphone which slides in and rests on a flat rubber band. In this position it is absolutely secure and cannot be taken out until the microphone cable is unwound from the pegs. The microphone is a standard product made by Cosmo-cord Ltd and is a good example of clear, simple design. Two collapsible steel legs enable it to be used either in the hand or on the table. On the cabinet itself, the magic eye is set into a rubber grommet in the face plate and the loudspeaker is mounted in a rubber extrusion around a hole in the wrapper, and screwed into place.

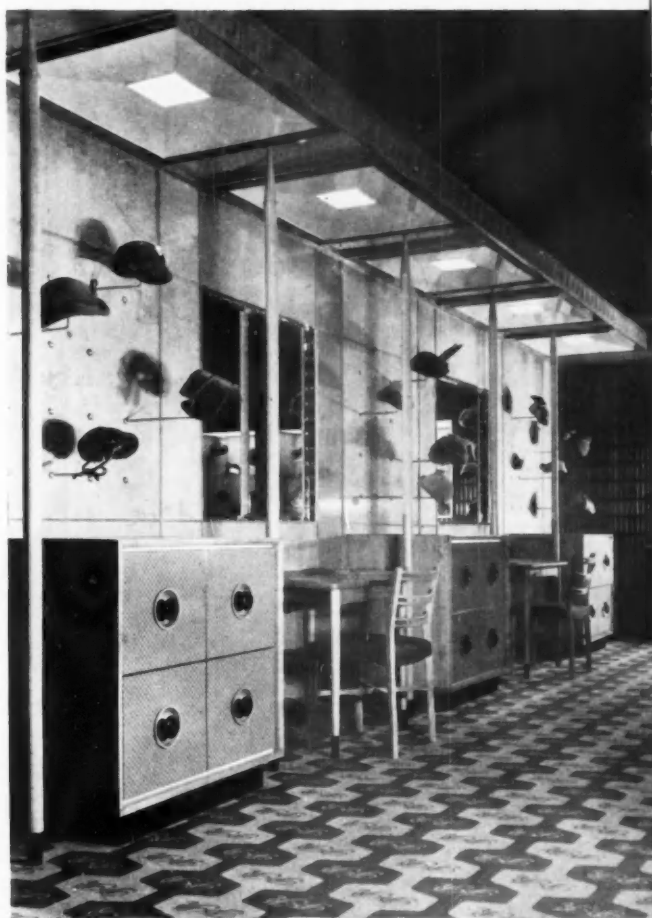
Owing to the method of construction, the finishing is comparatively simple. The cabinet is sprayed before complete assembly and in this way no masking is required. To prevent rust it is phosphated inside and out and this provides a suitable key for the crackle finish. A simple drop-on cover made of canvas with hard MASONITE sides gives additional protection to the front and back panels.

Redesigning Peter Robinson's store

IN THE master plan for the eventual redesign of the whole interior of these premises the walls now dividing the ground floor area will be demolished. The plan also includes the building of an open mezzanine running parallel with Oxford Street and 50 feet wide. Licensing difficulties, however, prevent the whole scheme from being carried out for the time being, but work has now been completed on the remodelling of the millinery department. As a large part of this will later come under the proposed mezzanine, it has been so designed that all the fittings can be reused. A temporary canopy has therefore been introduced around the walls, which will eventually be removed together with the posts which now support it. In addition to the millinery a small portion of the coats and skirts department has also been included in the first stage of the remodelling.

Owing to licensing restrictions little could be done to the general decorations, and the ceiling, cornice, columns and general illumination have had to be left until such time as the mezzanine can be built.

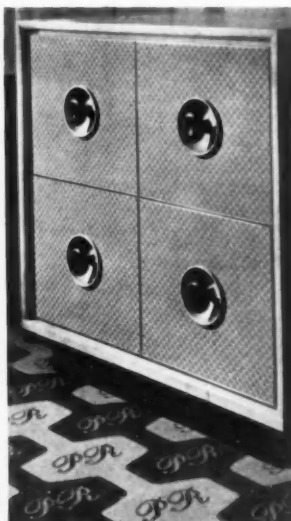
The designers were: Misha Black, Alexander Gibson, Norman Whicheloe, of Design Research Unit. General Contractors: Frederick Sage & Co Ltd.



General view of the millinery department. The canopy and supporting columns will be removed when the mezzanine is installed.



One of the light fittings in satin chrome finish with white enamelled perforated reflector.

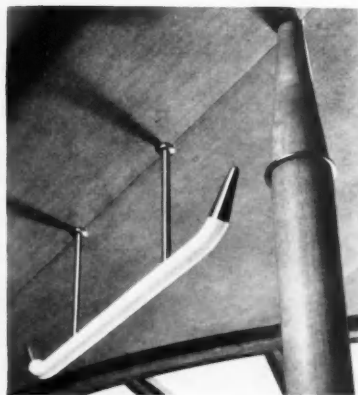
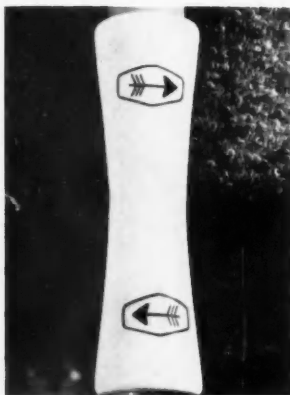


A drawer unit with handles of Honduras mahogany recessed in shallow sycamore cups. The drawer fronts are covered with grey and white WARERITE plastic sheeting specially designed by Jacqueline Groag. The carpet in green and grey incorporates the letters PR and is made by The Carpet Manufacturing Co Ltd.



Three revolving fittings to display coats and skirts. These fittings work on ball-races and the lower rail can be adjusted to allow for changes in the length of garments. The rails have a grey DOVERISED finish, a plastic covering applied in liquid form.

One of the handles on the revolving display fittings in white CATALIN plastic. The arrows are engraved and painted with black enamel.



A hanging rail, near the revolving display fittings, to take garments in the process of selection. The rail is of mild steel tube with a white DOVERISED finish. The metal caps and supporting rods are in satin chrome.

One of the buyers' desks in weathered sycamore with the top in dark green leather with gold panelled embossing.

The retail choice

Primarily for the retail trade, the DAILY MAIL 'Ideal Home Exhibition' provides an opportunity to see how many of the bigger furnishing stores are introducing contemporary ranges. But, apart from the firms who are well known for their progressive outlook, there was little evidence of a general change of heart. Most of the interesting developments were in the sections devoted to domestic and labour-saving equipment, where the controlling factors of function and common sense have for many years ensured a high standard of design. Only a small selection of the new designs is shown here: others will be included in subsequent issues.

1: A corner of the living room in a three-bedroomed flat built by the Ministry of Housing and Local Government and furnished for the CoID. Interior designer: Lady Casson. Retail furnisher: E. Mayes & Son Ltd.



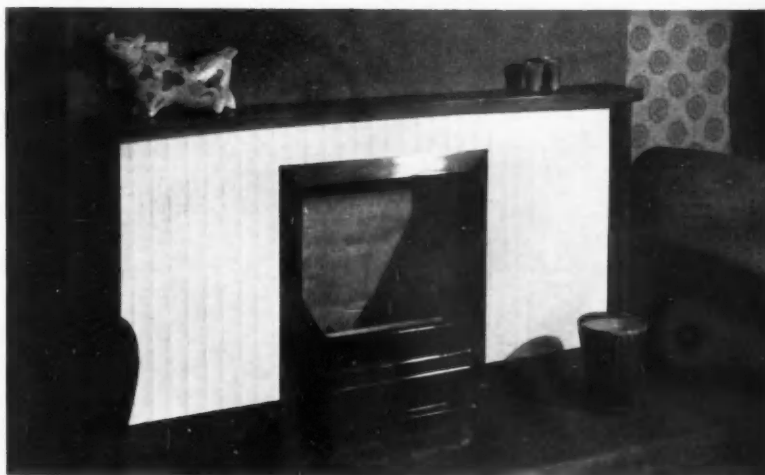
1

2



2: This lightweight travel iron is comparable in size to the average domestic iron but weighs only 1½ lb. The BAKELITE handle folds flat and the steel supports form clips for storing the lead. It incorporates an automatic voltage selector and an adaptable two-pin plug suitable for use in Britain, Europe and the U.S.A. Maker: Morphy-Richards Ltd.

3: One of the few contemporary fireplaces on show. The surround is of mahogany but can be supplied in a variety of timbers. Facing material of asbestos with plinth and hearth of red quarry tiles and fire opening in stainless steel. Designers: Geoffrey Dunn and Molly Benham. Maker: H. G. Dunn & Sons Ltd.



3

4: The angle of this GIRAFFE lamp can be adjusted by sliding the collar up or down the chromium-plated steel arm. The wiring is completely enclosed and the fitting may be suspended from the loop at the base and used as a wall lamp. Maker: Lustro Distributors Ltd.

4



5: The CANNON A 125 gas cooker (previously shown DESIGN February page 21) incorporates a collapsible, eye level grill above the hotplate. This enables the grill to be larger and the oven to be raised to a more convenient height. The burners are lit by a press button control and the oven door folds downwards to form a working tray. Maker: Cannon (Holdings) Ltd.

5



Design development of a spot welder

Spot welding is today accepted as a normal method of joining sheet metal. Not very long ago it was a novelty with many teething troubles to overcome. Within a short span of time the METROVICK welding designers have helped to write a chapter of engineering history of which this story is but one brief section.

THE ILLUSTRATIONS SHOW THE EVOLUTION of the METROVICK model AS 60/24 air-operated spot welder from the original form of 1938 to the present-day design. The changes which have been introduced aim at providing increased convenience to the operator, better facilities for maintenance and, at the same time, an improvement in the general appearance.

Manufacture is on a batch production basis and the limited quantities in each batch, as well as the competitive nature of the market, preclude the use of large press tools or special mouldings in plastic or other materials. Though many of these welders are used in light engineering industries where they are installed in clean workshops, they also have to be suitable for the conditions likely to be met in some branches of heavy engineering where they might not be afforded the same degree of protection. Robust construction is therefore essential. The machine frame was originally completely fabricated from mild steel plate, 1, and some of the projections were due to the weld and forge electronic timers.

In the next model, introduced only 18 months later, a more compact form of mechanical forge timer helped to eliminate projecting covers, 2 (DESIGN May 1952 page 9). At the same time double-ended electrode holder clamps were introduced, which allowed the electrodes to be used not only vertically but also at an angle.

The bottom bracket, cast in copper to a channel section, instead of being bolted to a flat apron plate in a limited number of positions, was then secured by bolts engaging in 'T' slots and positioned by a locating spigot. These bolts did not have to be removed when raising or lowering the bracket as before, but the weight of the latter still needed support during this operation. A lifting jack was incorporated in special cases only. An improved form of air pressure switch was fitted, but still remained on the outside of the top bracket. The foot switch was also improved by reducing its height, making it more convenient to operate.

Post-war design

The above model rendered stalwart service during the war years, but an appreciable step forward has since been made by incorporating several new features. In the prototype post-war design, 3 (DESIGN May 1952 page 9), the completely fabricated frame was replaced by a composite construction in which the main frame was still welded, but with the addition of cast iron side cheeks bolted to it. The use of castings proved economical in providing the complicated shape necessary for improved appearance and other design requirements.

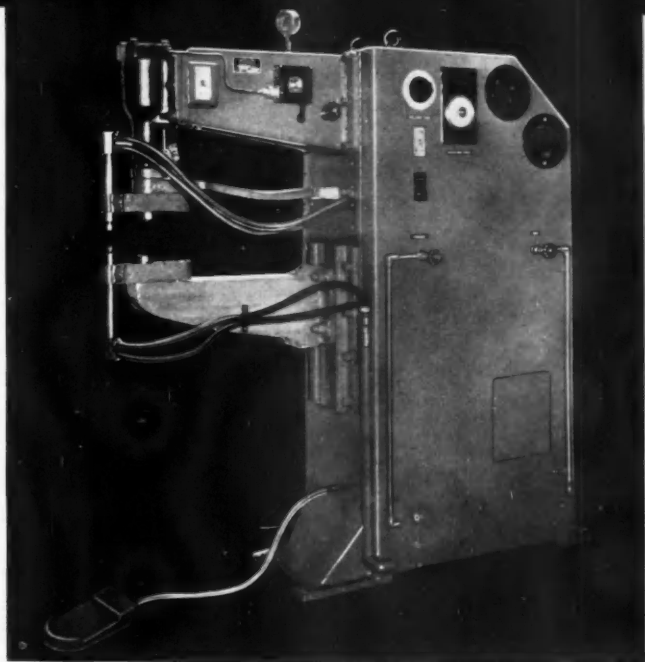
The main changes have increased the operating conveniences and eased maintenance work, largely because the interior is now more accessible. Not only are removable side panels or doors fitted at both sides of the top and bottom sections, 5, but the sheet steel top can be quickly taken off in one piece, 6. Smaller covers give access to the top bracket which has been redesigned for this purpose.

Perhaps the most noticeable improvement is the regrouping of the electrical controls. Those to be used



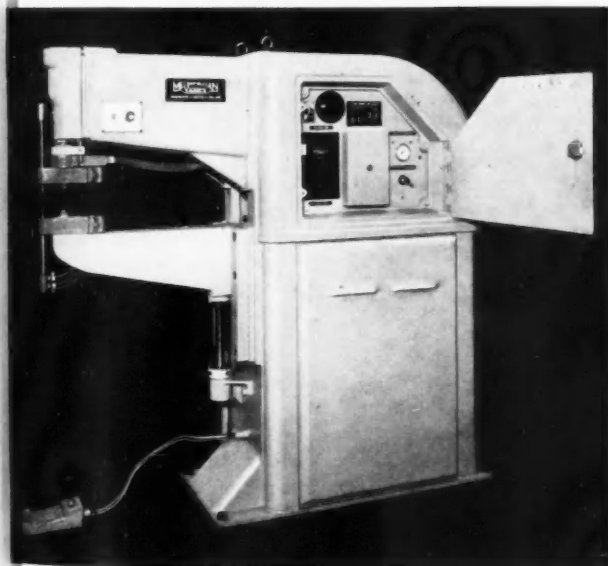
1

1938: The original spot welder by Metropolitan Vickers Electrical Co. The machine frame was completely fabricated from mild steel.



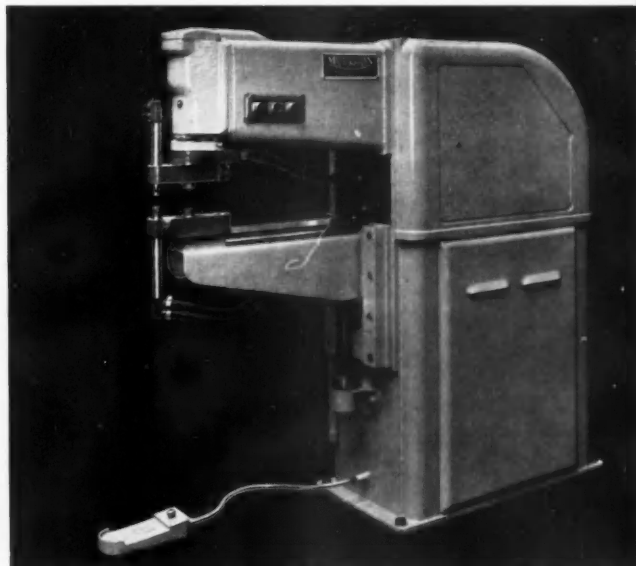
2

1940: In this second model projecting covers have been eliminated and new clamps allowed the electrodes to be used at an angle if required.



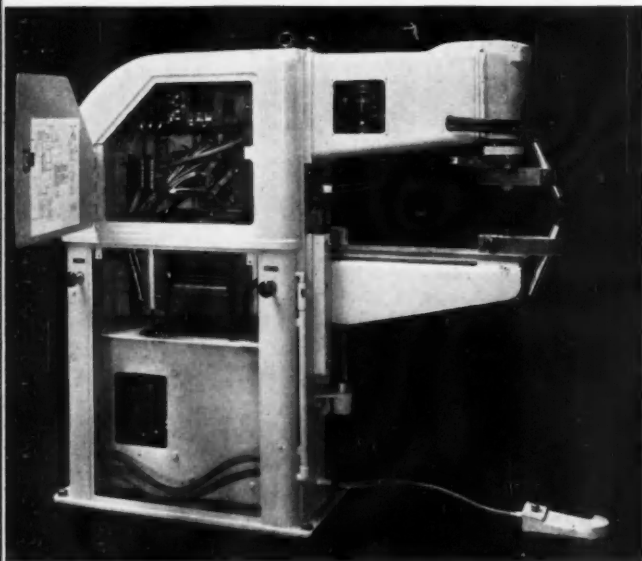
3

1950: The prototype post-war design in which composite construction replaced the completely fabricated frame. The grouping of the electrical controls has been improved with all but the operating controls located behind doors.

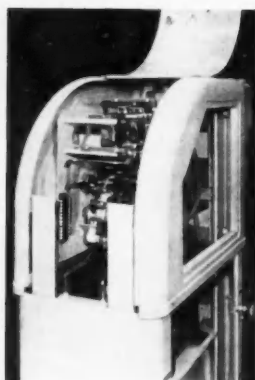


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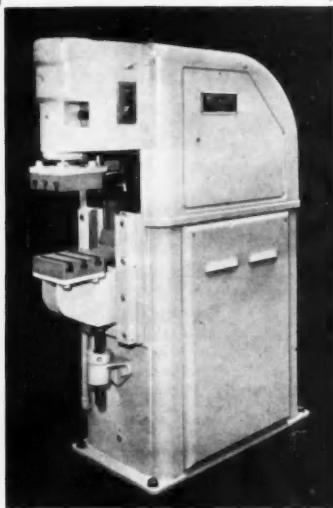
1951: In this latest model the sloping foot at the front of the machine has been removed and the top bracket has been simplified by the removal of the gusset plates. Note the steel bottom bracket which replaces the cast-copper of earlier models.



ABOVE: Maintenance has been eased by fitting panels or doors at both sides of the top and bottom sections. This view shows the electrodes in the tilted position.



LEFT: The sheet steel top can be simply removed for ease of maintenance.



RIGHT: 1952. Features developed for the spot welder have been incorporated in this projection welder. Note the similarity in appearance.

during normal operation are immediately to hand on the top bracket; those used for set-up are located behind a door which is normally kept locked. This regrouping has helped to simplify the outside of the machine, which is further improved by attaching both the air cylinder and the top bracket by means of internal bolts and by mounting such items as the air pressure switch within the structure of the machine.

An improvement much appreciated by the operator is the provision of the built-in jack, hitherto an 'extra', to help in raising and lowering the bottom bracket. The latter is attached to the apron by means of a rectangular machine slide, the side bars of which are secured by recessed screws. This results in a much cleaner arrangement than the previous one with its projecting bolts. The weight of the bracket during movement up or down is carried entirely by the jack.

The latest model

In the latest model, 4, there are further changes. The sloping foot at the front of the machine has been removed, and the top bracket has been simplified by the removal of the gusset plates. A valuable change, since it results in the saving of over 100 lb of copper, is the replacement of the cast-copper bottom bracket by a composite unit consisting of a mild steel welded bracket to provide the strength with a separate copper busbar to carry the current. A special arm is also available for welding where space is restricted, for example, in small diameter cylinders.

Interesting smaller changes include the use of a three-point switch unit of the new standard design on the top bracket. This is from the type UB range (DESIGN May 1952 page 8) and the additional switch is provided as a 'safety' or 'lock-out' switch. The large dished covers on the lower half of the machine frame, held by spring catches on the earlier model for easy removal, are now secured by countersunk screws. This change was recommended for reasons of safety since live parts are accessible behind the panels. The fact that a screw-driver is now required to remove the panels tends to discourage their unauthorised removal, but makes the interior no less accessible.

Many of the new features which have been developed for the spot welder are now being incorporated in other welding machines, some of which are made for special purposes. The similarity in appearance can be seen, for example, in the METROVICK AP 60/6 projection welder, 7, which replaced earlier models in 1952. The appearance, however, is still marred by the old nameplate which will shortly be changed. R.M.K.



An improved version of the conventional electric plug which incorporates a pressure stud to assist removal. The prototype, left, was invented by G. A. Campbell and the production model, right, is manufactured by Clang Ltd.

Invention into design

Leslie Hardern

With this article are shown examples of new inventions and design improvements previously demonstrated in 'Inventors' Club', a regular BBC television programme. The fact that they are now in production is an indication of how the amateur can make a contribution to design in the light engineering industries.

THE WORDS 'invention' and 'design' have a special significance for me as they have been connected with programmes which I have produced for the BBC during the last five years. My television programme 'Inventors' Club'* arose out of a series of sound broadcasts under the general title of 'Design and Women'. This was later followed by a television series called 'Workmanlike Design' in which, of course, I was able to exhibit the articles and discuss their appearance.

More than four years ago listeners and viewers wrote asking me to deal with special aspects of design, and with suggestions for improving the design of existing articles. From all the material that I received I realised that a small proportion of it consisted of genuine, though usually minor, inventions, and it was while handling these that I evolved the idea of the 'Inventors' Club' programme.

* A display of the club's work is at the B I F (Olympia).

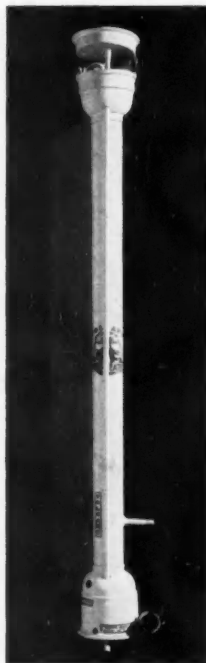
An interesting improvement on the conventional electric plug was devised by G. A. Campbell. In most households a lot of trouble is caused by the difficulty of pulling an electric feed plug away from its socket on the skirting board. There is a tendency to pull on the flex, which breaks away from the plug, and often the socket itself works loose. This problem was solved by inserting a simple pressure stud in the middle of the plug, and by pressing this with the thumb and easing the plug with the fingers it can be pulled away without difficulty. This invention is now being produced on a large scale by Clang Ltd.

Sometimes we are able to suggest improvements to the design of prototypes which are submitted to us, and, when inventions that we have sponsored go into production, we often see a complete metamorphosis from the wire, string and bits-of-metal prototype, to the clean-lined production model. One of the most striking examples of this was the PERSPECTOR, an

instrument for converting draughtsmen's working drawings into isometrics without any of the dotted lines and general grubbiness which result from ordinary methods. The prototype, which was shown in one of our first programmes, was made up by two young draughtsmen in an aeroplane works at Bristol, Donald Moore and his assistant, and consisted of pieces of string, MECCANO, old bicycle parts and wire. A much improved model is now produced by High Precision Equipment Ltd, and because of its excellent appearance we took the exceptional step of showing it to viewers in a later programme.

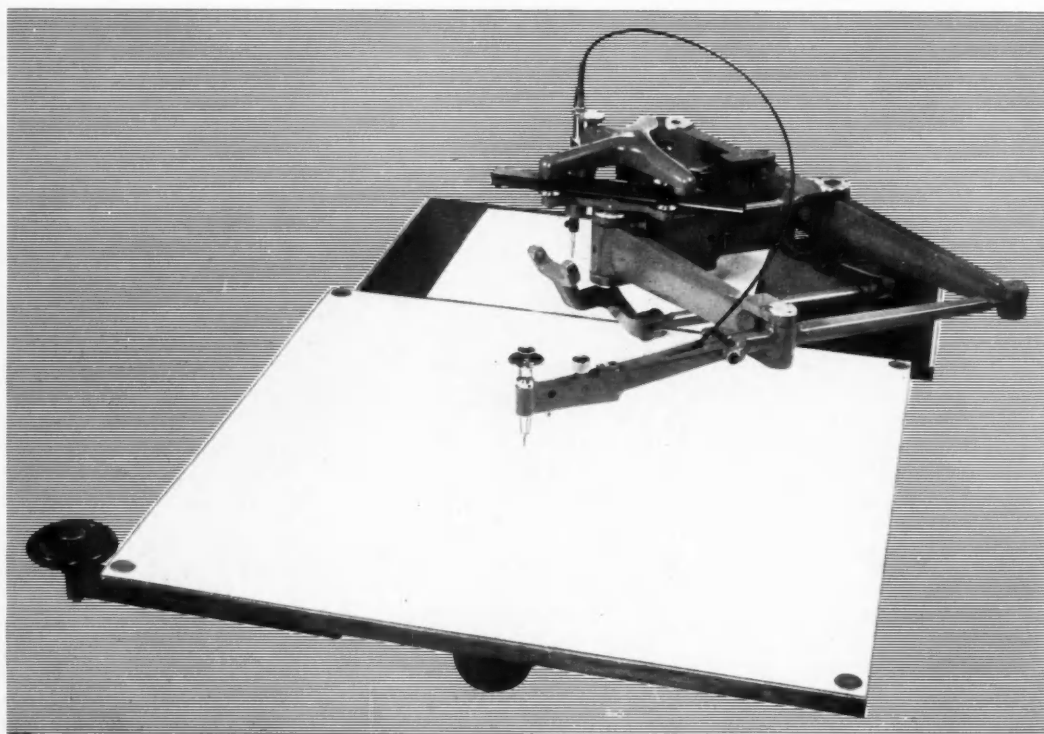
To cater for the people who have no hot

BELOW: *The PERSPECTOR, an instrument for converting working drawings into isometrics. Produced by Precision Equipment Ltd, from a prototype designed by Donald Moore and his assistant.*



water supply at their sinks, and who cannot afford to install even the cheapest existing type of water heater, E. D. Bodley developed an idea for an instantaneous gas water heater on very simple lines. The model was submitted to us in prototype form and we were sufficiently convinced of its possibilities to encourage the inventor to develop his design in conjunction with the gas industry's Central Research and Development Laboratories. It is now manufactured by Volcano Heaters, and though it delivers only about half the amount of hot water produced by the more normal type of heater, it costs only £4 19s 0d and is very cheap to run. It is stove enamelled and may be obtained in several colours.

LEFT: *Instantaneous gas water heater produced by Volcano Heaters from a prototype designed by E. D. Bodley. The cost of this heater is approximately one third of that of existing types on the market.*



NEWS

New members for CoID Scottish Committee

Five new members have recently been appointed to the Scottish Committee: Dr. David S. Anderson, Director of the Royal Technical College, Glasgow, and for 16 years previously Principal of the Central Technical College, Birmingham; Mr W. Hope Collins, Managing Director of the William Collins Sons & Co Ltd, the Glasgow publishers; Mr T. Coughtrie, Chairman of the Belmos Co Ltd, Manufacturers of Electrical Switchgear; Mr Robert H. Matthew, recently appointed Professor of Architecture at Edinburgh University and Head of the School of Architecture at the Edinburgh College of Art, who will be well known to readers as Chief Architect to the London County Council and designer of the Royal Festival Hall; and Mr William Rennie, Chairman of Federated Foundries Ltd, who was a member of the Scottish Committee from 1944 to 1948 and has been re-appointed for a new term.

Mrs Charles Taylor and Mr J. Crawford McKell have been re-appointed for two years.

Mr Ronald Bell, Mr D. Maitland Gardner, Mr William Grimmond, Mr Ian A. Laird and Mr R. H. Millar have recently retired on completion of their terms of office.

British designs in Zurich

Over 1,000 examples of current British industrial design, including textiles, furniture, carpets, wallpapers, light fittings, pottery, glass, silverware, leather goods, printing and bookbinding, radio sets, sports goods and Coronation souvenirs, will be shown at the Kunstgewerbemuseum, Zurich, on June 18 for about three months. The display is being mounted by the British Council and the principal selection of exhibits is being made from 'Design Review', the CoID's photographic index of current British products.

London designer for Bulawayo exhibit

The Schlesinger Organisation of South Africa has appointed W. M. de Majo as designer of the Company's exhibit at the Rhodes Centenary Exhibition, Bulawayo. The exhibit will include a historical section with displays showing the widespread activities of the Schlesinger Organisation. It was designed and partially constructed in London and was pre-erected here for inspection by the Organisation's Chairman, John S. Schlesinger, before being shipped to South Africa.

Diplomas for salesmen

The National Association of Retail Furnishers has reported that salesmen who have taken the National Furnishing Diploma give better service to their customers and employers and are more liable to earn promotion for themselves. The Association calls for an extension of the classes in towns where they are not already held. As design plays a considerable part in the curriculum

the Association is anxious to have the co-operation of art and craft colleges in starting classes and supplying instructors.

Details of the Diploma and procedure for starting classes may be obtained from the Secretary, NARF, 356 Oxford Street, London W1.

SIA textile exhibition

An exhibition entitled 'Designers of Textiles' was held recently in London by the Textile Group of the Society of Industrial Artists. The present chairman of the Group is Alec Hunter, of Warner and Sons Ltd.



The exhibition showed woven and printed furnishing and dress fabrics designed by members of the SIA. A small section (see left) was set aside for carpets (notably John Palmer, Ronald Grierson, Tibor Reich) and wallpapers (including one by R. Y. Goodden who did pioneering work in this field in the 'thirties'). A further section dealt with students' work, which was chiefly remarkable for the woven fabrics from the School of Textile Design at the Royal College of Art.

The main part of the exhibition was devoted to furnishing fabrics. The designers whose work showed the greatest interest are already well known: (weaves) Marianne Straub, Tibor Reich, Margaret Leischner; (prints) Jacqueline Groag, Lucienne Day and Anne Loosely, some of whose work carried out by a new process will be shown in a subsequent issue of DESIGN. Amongst the woven fabrics, Marianne Straub's designs were exceptional for their simplicity and precision, but it was disappointing to find that no designer had made significant use of the Jacquard loom.

RSA Bursary winners

The Royal Society of Arts has announced the result of the 1952 Industrial Art Bursaries Competition. Bursaries amounting to £2,225 were awarded and 11 winners will be eligible for Associate Membership of the Society.

An exhibition of winning and commended designs will be held from May 11 until May 22 at the RSA, 6-8 John Adam Street, Adelphi, London WC2. It is hoped that the 1953 competition will include several new sections and full particulars are available from the Society. Entry to the competition is free and the closing date for the receipt

Meetings for USA design directors

The first of a series of conferences for design directors was held recently at the GEC Major Appliance Division headquarters at Louisville, USA. The meetings, which have been arranged to discuss effective ways of operating design departments as well as other design problems, will be held at various company headquarters every few months on a rotating basis. The next meeting will be held at the Corning Glass Co during the latter part of May. The designers are, from left to right: (seated) J. Van Koert, Towle Manufacturing Co; A. N. BecVar, General Electrical Co; T. G. Clement, Eastman Kodak Co; H. C. Doner, Libbey-Owens-Ford Glass Co; (standing) J. B. Ward, Corning Glass Co; J. Birnie, Reynolds Metals Co; G. H. Kress and C. J. Jaworski, International Business Machines Corp; W. C. Granville, Container Corporation.





New ticket office at Paddington

Entrance to the new ticket office among the contrasting mid-Victorian decorations of Paddington station. This and a new enquiry office on platform one are part of British Railways' plan for the modernisation of stations. The new offices were designed by the Architect's Office of the Western Region and the work was carried out by Marshall Andrews & Co Ltd.

of entry forms will be October 12, 1953. The Society, which finances the administration, also contributes £200 towards the bursaries, the bulk of which are provided by industry.

The following is a list of students awarded bursaries of £150 each.

Domestic electrical appliances section: Geoffrey Gale, LCC Central School of Arts and Crafts. Electric-light fittings section: Leonard Summers, Birmingham College of Art and Crafts. Domestic gas appliances section: Colin Cheetham, LCC Central School of Arts and Crafts. Domestic solid-fuel-burning appliances section: Josephine Mathews, Kingston School of Art. Furnishing textiles section: Mary Middleton, LCC Central School of Arts and Crafts. Laminated plastics section: Ronald Whiteside, Kingston School of Art. Footwear section: Gabrielle Wilkins, Thanet School of Art and Crafts. Furniture section: Donald Pedel, High Wycombe College of Further Education. Carpet section: Raymond Portman, Kidderminster School of Science and Art. Dress textiles section: Ann Cutbill, LCC Central School of Arts and Crafts; Jacqueline Needham, Coventry School of Art; Ursula White, LCC Central School of Arts and Crafts (also awarded the Sir Frank Warner Memorial Medal).

In addition bursaries of £100 each were awarded to William Holdaway, Kingston School of Art, in the domestic solid-fuel-burning appliances section; and to Michael McInerney, Brighton College of Art and Crafts, in the furnishing textiles section. Bursaries of £75 each were awarded to Barbara Batt, Brighton College of Art and Crafts, and to Rhoda Hagg, Norwich City College and Art School, both in the men's wear fabrics section; and to Martin Grierison, LCC Central School of Arts and Crafts, in the furniture section.

Coronation competition

A competition for the design of a candelabrum or centrepiece has been organised by the Wardens of the Worshipful Company of Goldsmiths. The candelabrum will be

presented by E. Cecil Jones to the Corporation of Southend-on-Sea to commemorate the Coronation of Her Majesty Queen Elizabeth II. The competition is open to all designers of British nationality and £100 is available for prizes including the winning designer's fee. Designs should be submitted not later than May 22 to the Clerk of the Worshipful Company of Goldsmiths, Goldsmiths' Hall, Foster Lane, London EC2. Further details of the competition may also be obtained from this address.

Modern Venetian glass

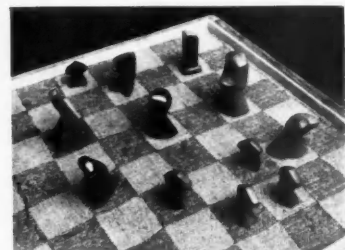
An exhibition of modern Venetian glass will be held on the fourth floor at Liberty's, Regent Street, from May 1-16.

SIA President

Ashley Havinden has been elected president of the Society of Industrial Artists in succession to Lynton Lamb. Mr Havinden is a Director and Art Director of W. S. Crawford Ltd.

Free-shaped chessmen

To the uninitiated, chessmen are recognisably carved in red or white ivory. But there are sets made of glass, or Wedgwood ware, wood and iron, even silver and semi-precious stones. In the 'thirties the Russians made political propaganda with a porcelain set of capitalist whites, the pawns in chains, and Red army officers as bishops. Chess evolved from a seventh-century Indian game known as *chaturanga*, and to this day remains one of the most international of games. In America last year there was a demonstration at Manhattan of three-dimensional chess, using 128 chessmen on eight different levels, provided by transparent, squared glass boards.



Now Bruno Simon of London has made a set in coloured and natural terracotta. These free-shaped chessmen are cast in two-piece moulds. The forms used are indicative of the individual movements allowed to the six characters in chess. The base of the Bishop, for instance, emphasises the diagonal direction in which he moves. The board itself is framed in wood and covered in a rough, home-spun check. The main pieces reading from left to right are Queen, Bishop, Knight, Knight, Castle, King and Bishop.

DIA EXHIBITION, Register your choice

ANALYSIS OF VOTES

30,334 valid votes were cast. Sixty per cent voted for the 'contemporary' room, as did 59 per cent of the men, 61 per cent of the women, 53 per cent of the over 35s and 63 per cent of the under 35s.

| VOTERS' GROUP | ROOM L (Best trade sellers) | | ROOM R (Contemporary) | | GROUP TOTAL |
|--------------------------------------|--------------------------------|------------------|--------------------------|------------------|-------------|
| | Votes | % of group total | Votes | % of group total | |
| Men | 7,224 | 41 | 10,522 | 59 | 17,746 |
| Women | 4,922 | 39 | 7,666 | 61 | 12,588 |
| Men and Women | 12,146 | 40 | 18,188 | 60 | 30,334 |
| Over 35 | 5,637 | 47 | 6,275 | 53 | 11,912 |
| Under 35 | 6,413 | 37 | 10,913 | 63 | 17,326 |
| Men Over 35 | 3,470 | 48 | 3,781 | 52 | 7,251 |
| Men Under 35 | 3,750 | 39 | 5,809 | 61 | 9,559 |
| Women Over 35 | 2,167 | 46 | 2,494 | 54 | 4,661 |
| Women Under 35 | 2,663 | 34 | 5,104 | 66 | 7,767 |
| Bought £10 or more furniture in 1952 | 650 | 45 | 800 | 55 | 1,450 |
| Bought less than £10s' worth | 550 | 35 | 1,000 | 65 | 1,550 |

Notes: 1. Of the 30,334 who voted only 29,238 indicated their age group. This accounts for a slight discrepancy in percentages between the first three lines and the next six.

2. The analysis of votes by expenditure on furniture is based on a test sample of 3,000 votes.



New Danish chair

This new chair from Denmark has a light beech frame, is upholstered with DUNLOPILLO and is covered with a 'Titian' cloth in blue, rust, yellow or green. It retails at approximately £12 12s 6d and is made by the firm of Farstrup Savvaerk Stolefabrik. English distributor: Finmar Ltd.

Modern Danish housing

'Modern Danish Housing' is the title of an exhibition which is being held at the Building Centre until May 9. The exhibition, which consists mostly of photographs, includes a selection of contemporary Danish furniture and wallpapers. Most of examples on show may be obtained in this country from Finmar Ltd or from Heal & Son Ltd.

Swedish design and architecture

Lectures by well-known specialists on architecture, town planning, art and design will form part of a course entitled 'Swedish Design and Architecture' to be held in Stockholm on August 17-29. The course also includes suitable visits in and around Stockholm. Applications may be made through the Swedish Institute, 40 Egerton Crescent, London SW3 and the cost, including accommodation, will be about £50.

Carpet design competition

The trade journal FURNISHING is holding its fifteenth carpet design competition which is open to students and practising designers. The competition, which is supported by the Federation of British Carpet Manufacturers, is divided into four classes and prizes of £10 and £5 with a number of diplomas will be awarded in each class. An additional prize of £60 will be awarded for the best design in the competition. The classes are for a Wilton square, suitable for a modern office; a Wilton three-quarter width body carpet, suitable for a department store; a spool Axminster square, suitable for a small bedroom; and a spool Axminster rug, suitable for use on a dark grey carpet. Sketches, which must be submitted before September 21, should be addressed to The Editor, FURNISHING, Drury House, Russell Street, London WC2. No entry forms are required and further details may be obtained from the editor of FURNISHING.

Design and research centre

The Design and Research Centre has had to restrict its activities. The Centre was largely dependent for financial support on the Jewellery and Silverware Council which closed down in December of last year. Now the Governing Council of the Centre has set up a representative, independent and informal committee of manufacturers to find out what design and research facilities are wanted by the industry. In the meantime a nucleus staff is maintained at the Centre to deal with enquiries, maintain the library and administer the Purchase Tax Relief scheme.

Any manufacturer who holds definite views as to how the Centre can best be carried on is invited to communicate with 'The Secretary, Manufacturers' Committee, Design and Research Centre, Goldsmiths' Hall, Foster Lane, London EC2.

Design for doctors

In its issue for March 1953, the MEDICAL WORLD began a feature on 'Design in General Practice', which is claimed to be new to medical journalism. The magazine feels that there is a need to encourage general practitioners to improve the design of their waiting and consulting rooms. The editorial comments: "In his premises and equipment, however, the GP is still relying on the same materials as his nineteenth-century predecessors; and by and large on the same forms. Advances in these fields have taken place parallel to those in medical preparations, but are directed largely to the production of such things as automobiles, aircraft, packaging and office equipment."

The new feature on design will be included in each month's issue. Information from manufacturers and designers who are concerned in this field is welcomed by The Editor, MEDICAL WORLD, 55-6 Russell Square, London WC1.

Post-war Layton type cabinet

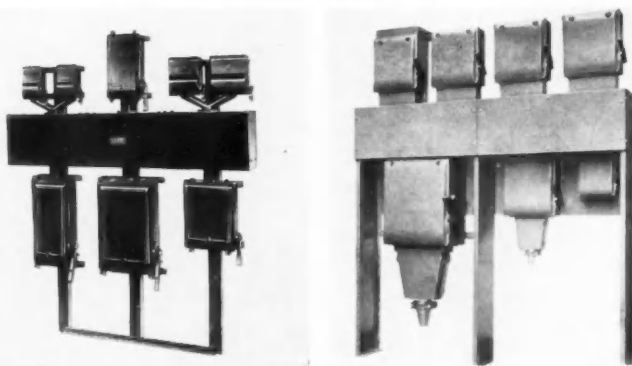
There can be few practising typographers, layout men and production men who do not know the Layton's type face cabinets as a source of reference. They have an impressive reputation, and Cecil Meyer was given the task of directing the complete overhaul and redesigning of the cabinets after the war. His task is now completed and the cabinets are available in two forms. The Master cabinet, which is mounted on a trolley, contains over 450 sheets of specimens.



The Working cabinet (above) is similar to the pre-war version and has 153 reference sheets and a synopsis. Each type specimen sheet is a good compromise between what typographers would like to have and what can be put into a practical size of cabinet. The historical notes on type faces are another improvement on the original sheets. Those interested should write to C. & E. Layton Ltd, Standard House, Farringdon Street, EC1 for further details.

New range of GEC switchgear units

The new range of switchgear, recently introduced by The General Electric Company Ltd, has a pleasing appearance compared with units of the earlier pattern (left). This improvement is due not only to the simplification of the general shape and the use of colour, but also to the redesigning of such exterior features as fixing feet, clamps and hinges. All these have been enclosed in the main body of the case. The switches are finished in grey with handles and locking buttons in green. Pressed steel is used to form the cases and the lids are of cast iron. The new designs were carried out by the Drawing Office of the GEC Switchgear works at Witton, Birmingham, in collaboration with Leslie J. Roberts, of the company's industrial design section.



Posters from four countries

Abram Games has been invited by the Museum of Modern Art, New York, to be the English representative in an exhibition of posters from four countries which is to be held until May 17 in New York. The other exhibitors are Savignac of France, Aicher of Germany and Max Bill of Switzerland.

Uses of latex foam

The British Rubber Development Board has issued a new booklet, written and produced by Dennis Young, on the uses of latex foam in upholstered furniture (see DESIGN January pages 20-2). The booklet, entitled 'Upholstering with Latex Foam', is illustrated with drawings and describes briefly how latex foam is made and how it may be shaped and adapted for a variety of purposes. This and other booklets on the subject, including 'Latex Foam in the Home', 'Latex Foam in Furniture Design and Manufacture' and 'Sitting in Comfort' may be obtained from the BRDB Information Service, Market Buildings, Mark Lane, London EC3.

AWC proportioner

All those who have to work out proportions of originals for reproduction will welcome the news of an instrument to speed up this tedious but most necessary chore. The proportioner, which is made of PERSPEX and machine calibrated in 1 inch, works on the accepted principle of a right angle with a sliding cursor and a diagonal arm pivoted around a thumb screw.

The instrument, designed by A. W. Coombs, works well and is true, but if it were made of thinner PERSPEX even greater accuracy could be achieved. Produced by Proportional Instruments, 54 Carlton Road, Walton-on-Thames, Surrey.

Designers in this issue

Art Editor: Peter Hatch, MSIA. Cover: F. H. K. Henrion, FSIA. Arnheim, Lucie (16). Barnes, John, MSIA (8, 13, 14). BecVar, A. N. (35). Benham, Molly (29). Birnie, J. (35). Black, Misha, OBE, FSIA, M.Inst.RA (DRU) (27). Casson, Lady, ARIBA (29). Chadwick, Hulme, ARCA (20). Clement, T. G. (35). Cohn, Erna (16). Coles, Beryl, LSIA (21). Coombs, A. W. (38). Day, Lucienne, ARCA, FSIA (16, 20, 35). Doner, H. C. (35). Dunn, Geoffrey (29). Games, Abram, FSIA (38). Gibson, Alexander, ARIBA, AA.Dipl. (DRU) (27). Gibson, A. (21). Grierson, Ronald, MSIA (35). Goodden, R. Y., RDI, ARIBA, AA.Dipl. FSIA (35). Granville, W. C. (35). Groag, Jacqueline, FSIA (27). Harper, Mary, MSIA (21). Havinden, Ashley, OBE, RDI, FSIA, FRSA, FIPA (36). Hofbauer, H. (17). Jaworski, C. J. (35). Koert, J. Van (35). Kress, G. H. (35). Lamb, Lynton, FSIA (36). Leischner, Margaret, FSIA (35). Lennon, Dennis, MC, ARIBA (16). Loewy, Raymond, SID (11, 13, 14). Loosely, Anne, MSIA (35). Lindberg, Stig (6). Meyer, Cecil, MSIA (37). Nieboer, H. A., AMIME, FRSA, MSAME, SID (26). Palmer, John, DA, MSIA (21, 35). Read, A. B., ARCA, RDI (16). Reich, Tibor, FRSA, ARI, FSIA (20, 35). Roberts, Leslie J., MSIA (37). Sken, Henry (17). Simeon, Margaret, MSIA (21). Simon, Bruno (36). Straub, Marianne, FSIA (21). Todd, George (21). Villeneuve, Noel (17). Ward, J. B. (35). Wedd, J. A. D. (38). Whicheloe, Norman, ARIBA (DRU) (27). Wilhelm, Riphahn (19). Wright, John (17).

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DESIGN criticism

SIR: Might not the process of self examination, which your magazine is at present undergoing, be a good opportunity to start tempering your lavish praise of novel designs with a little more practical criticism?

The descriptions of the Time & Life building (DESIGN March pages 12-54) were very interesting but while there was very much excellent design which you recorded, your criticism of some things was a little mild or sometimes non-existent. For instance, the clock mounted on a mass of scrap iron was an atrocity which should have been soundly condemned. Being one of those difficult people who use a clock to tell the time, I can only tolerate restrained legible designs such as the standard electric clock also shown. Maybe your criticism is limited by tact.

R. D. C. PASSEY
6 Lawrence Grove
Henleaze
Bristol

Aircraft windows: question

SIR: The very impressive article on 'Interior Design in the Air' (DESIGN February pages 8-13), prompts me to ask a question that many occasional air passengers would like to ask. What thought is given to giving a good window view to passengers on the gangway seats of aircraft? My own experience is that the view from these seats is small and awkward, which leads to an undignified and only partly concealed scramble for the better places when an aircraft is boarded. I must admit that I have never travelled on a Comet.

The technical difficulties in the way of angling windows or otherwise improving matters are, of course, very great, but I should be comforted if I knew that somebody was at least giving some thought to the problem.

MAX DAVIES
Operational Research Club
11 Park Lane
London W1

... answer

SIR: A good window view for passengers sitting in gangway seats would, of course, only be possible if very large windows were provided as in a bus. This is achieved in small unpressurised airliners such as the de Havilland Heron but is impracticable for a pressurised aircraft. A window contributes nothing to the 'hoop' strength of an internal pressurised cylinder, consequently windows have to be kept very small. In actual fact, considering the Comet is pressurised to more than twice the amount usual in other airliners, its windows are, by comparison, large. Even so there is something like half a ton load acting outwards on each window. It seems, therefore, that there will always be an 'undignified and only partly concealed scramble for the better places when an aircraft is boarded'. Your reader can rest assured that the size of the Comet windows is the largest possible compatible with structural considerations.

J. M. RAMSDEN
The de Havilland Aircraft Co Ltd
Hatfield
Herts.

Railway design

SIR: It was a pleasure to read the well-deserved tributes Mr Alan Whitehead paid railway engineers in his letter published in your April issue.

There is plenty of good design to be found on British Railways today - especially in their new signal boxes, marshalling yards and carriage cleaning depots - and as a regular reader of DESIGN I often wish you gave more attention and credit to design achievements in the transport and industrial fields and a little less to uninspiring furniture, some of which will be consigned to the junk shop by the next generation.

D. M. DOW (Mrs)
11 Belsize Road
Hampstead
London NW6

'Quartics' defined

SIR: I must apologise for the omission of many details in my article, which was already highly compressed before Procrustes gave it hospitality. May I emphasise five points, each of which is worth an article all of its own?

1. The distinction between the old and the new geometry, or between lessons illustrated by figures drawn in the sand and on paper with rectangular trim. Drawing office practice is still regrettably Euclidian.

2. The ellipse as an 'emergent'. By an identical process, I believe, the quartics are now emerging, and curiously enough are also finding their first concrete expression as table tops.

3. The revolutionary implications of Maxwell's string and pin construction, and the present-day availability of elliptical compasses. Either will draw a line of shifting curvature. It was because compasses were inadequate to draw them that the 'free forms' were allowed such license.

4. Classification. The new geometry gives us a classifying system we hitherto lacked. To have got as far as distinguishing the class 'quartic' among the other curvilinear forms is an improvement in terminology.

5. Function. Just as the parabola has become a structural entity, so will many of the quartics. The cardioid is already used in electronic engineering. The aerofoil has its place in aero engineering, though not yet tackled as a Cartesian curve. The magatama, I believe, has also a special role to play, and will take over the functions of the already familiar kidney.

To answer Mr Pye's letter, a quartic is a curve representing an equation of the fourth degree. A straight line cannot cut it at more than four points, and no section of it is a straight line.

The sub-title, not mine, referring to 'vaguish shapes', 'clichés' and 'popular forms' was regrettably misleading. The quartic is surely an emergent, here to stay, and of similar significance to the ellipse and other 'conics'. It is precisely because it is not on a par with zig-zags and arabesques that it is so important. The reason it is so widespread is surely that society, however unconsciously, is nibbling at the new geometry and its implications. When the electrolytic tank, or some other such instrument, is harnessed to the work, it will be possible to carve out ships' hulls, aeroplane wings, propeller blades, etc mechanically, utilising an equation in the first place. These forms are still being produced in more or less complete disregard for any geometry of more recent date than 300 B.C.

J. A. D. WEDD
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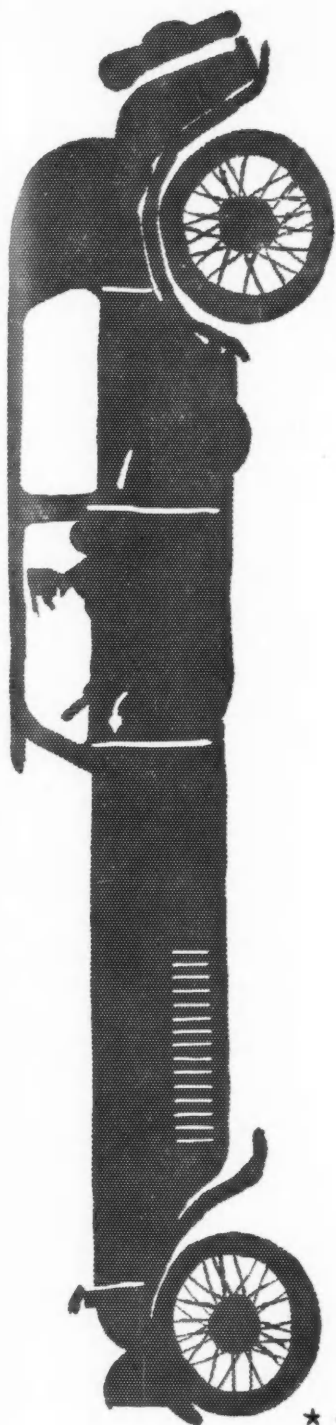
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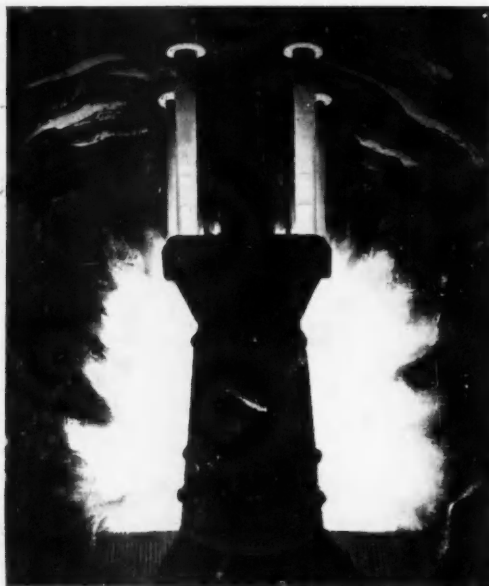
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